National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Services des thèses canadiennes

Ottawa, Canada
K1A 0N4

CANADIAN THESES

THÈSES CANADIENNES

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30.

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

Canada

NL-339 (r.86/06)

THE UNIVERSITY OF ALBERTA

Missa Serialis

by

Blyth Nuttall

C

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF MUSIC

IN

COMPOSITION

DEPARTMENT OF MUSIC

EDMONTON, ALBERTA

FALL, 1985

Permission has been granted to the National Library of Canada to microfilm this thesis and to lend or sell copies of the film.

The author (copyright owner) has reserved other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without his/her written permission.

L'autorisation a été accordée à la Bibliothèque nationale du Canada de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur (titulaire du droit d'auteur) se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation écrite.

ISBN 0-315-37854-9

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR Blyth Nuttall

TITLE OF THESIS Missa Serialis

DEGREE FOR WHICH THESIS WAS PRESENTED Master of Music

YEAR THIS DEGREE GRANTED 1985

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

PERMANENT ADDRESS:
2120-35 st.
Edmonton, Alberta

DATED 7 Aug-st 1985

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled.....

Missa Serialis

.....

submitted by NUTTALL, Blyth Edwin

in partial fulfillment of the requirements for the degree of Master of Music in composition.

Malcolm Forsyth

Supervisor

Alfred Fisher

Gerald Hanaham

Date 2 July 1985

Abstract

Missa Serialis is a setting of the ordinary of the mass for choir SATB and orchestra of moderate size. The text is in Latin. The orchestra requires two flutes, two oboes, two clarinets, two bassoons, two trumpets, two horns, three percussionists, and strings.

The work employs strict serial technique but only as regards pitch selection. Two twelve-tone rows are used. The rows are not used as an ordered series of twelve pitches. Each is used as an ordered series of four groups of three unordered notes. In order to serialize pitch on a long range basis two chains of rows, one for each row, were arrived at during the precompositional process. To create the links, a trichord from a row is mapped onto a trichord of the same row subjected to a row operation. The piece contains two parallel serializations of pitch. When a chain is completed, it restarts; thus all pitch is ordered.

The two rows have been constructed and divided into trichordal segments so as to yield contrasting harmonic content between row chains. The harmonic content of the two rows is useful in giving dramatic contrast to the text and a sense of form to the work as a whole.

The work is twenty minutes in length. Missa Serialis is intended for concert purposes rather than use during the celebration of the mass.

TABLE OF CONTENTS

TEXT 1

ANALYSIS OF Missa Serialis

Rows and Row Chains..... 3

Harmony..... 9

Thematic/Motivic Organization..... 12

Missa Serialis

Title Page..... 28

Kyrie..... 29

Gloria..... 46

Credo..... 70

Sanctus and Benedictus..... 91

Agnus Dei..... 108

Text

The text for Missa Serialis was taken from Licinio Refice's Missa Choralis (J. Fischer & Bro., c1916). This edition of Missa Choralis bears the imprint "Nihil Obstat. Namens de Commissie tot keuring van kerkelijk-muzikale compositiën. Leiden, Sept. 1931 (signed) Th. M. Beukers, Voorzitter."

To adjust the text to accepted practice in concert use the phrase "Gloria in excelsis" was inserted at the beginning of the Gloria and the phrase "Credo in unum Deum" was added to the beginning of the Credo.

The syllabification used was also taken from Licinio Refice's Missa Choralis. That text is as follows.

Kyrie

Ky-ri-e e-le-i-son, Ky-ri-e e-le-i-son, Ky-ri-e e-le-i-son.
Chri-ste e-le-i-son, Chri-ste e-le-i-son, Chri-ste e-le-i-son.
Ky-ri-e e-le-i-son, Ky-ri-e e-le-i-son, Ky-ri-e e-le-i-son.

Gloria

Glo-ri-a in ex-cel-sis De-o
Et in ter-ra pax ho-mi-ni-bus bo-nae vo-lun-ta-tis.
Lau-da-mus te.
Be-ne-di-ci-mus te.
Ad-o-ra-mus te.
Glo-ri-fi-ca -mus te.
Do-mi-ne Deus,
Gra-ti-as a-gi-mus ti-bi pro-pter ma-gnam glo-ri-am tu-am.
Rex coe-le-stis,
De-us Pa-ter o-mni-po-tens.
Do-mi-ne Fi-li u-ni-ge-ni-te, Je-su Chri-ste.
Do-mi-ne De-us,
A-gnus De-i,
Fi-li-us Pa-tris.
Qui tol-lis pec-ca-ta mun-di,
mi-se-re-re no-bis.
Qui tol-lis pec-ca-ta mun-di,
sus-ci-pe de-pre-ca-ti-o-nem no-stram.
Qui se-des ad dex-te-ram Pa-tris,
mi-se-re-re no-bis.
Quo-ni-am tu so-lus san-ctus.
Tu so-lus Do-mi-nus.
Tu so-lus Al-tis-si-mus, Je-su Chri-ste.
Cum San-cto Spi-ri-tu,
in glo-ri-a De-i Pa-tris.
A-men.

Credo

Cre-do in u-num De-um.
Pa-trem o-mni-po-ten-tem fa-cto-rem coe-li et ter-rae,
vi-si-bi-li-um o-mni-um et in-vi-si-bi-li-um.
Et in u-num Do-mi-num Je-sum Chri-stum,
Fi-li-um De-i u-ni-ge-ni-tum.
Et ex Pa-tre na-tum an-te o-mni-a sae-cu-la.
De-um de De-o,
lu-men de lu-mi-ne,
De-um ve-rum de De-o ve-ro:
Ge-ni-tum, non fa-ctum,
con-sub-stan-ti-a-lem Pa-tri:
per quem o-mni-a fa-cta sunt.
Qui pro-pter ho-mi-nes et pro-pter no-stram sa-lu-tem de-scen-dit de coe-lis.
Et in-car-na-tus est,
de Spi-ri-tu San-cto ex Ma-ri-a Vir-gi-ne:
Et ho-mo fa-ctus est.
Cru-ci-fi-xus e-ti-am pro no-bis sub Pon-ti-o Pi-la-to pas-sus et se-pul-tus est.
Et re-sur-re-xit ter-ti-a die se-cun-dum Scri-ptu-ras.
Et a-scen-dit in coe-lum se-det ad dex-te-ram Pa-tris.
Et i-te-rum ven-tu-rus est cum glo-ri-a ju-di-ca-re vi-vos et mor-tuo-s;
cu-jus re-gni non e-rit fi-nis.
Et in Spi-ri-tum San-ctum Do-mi-num,
et vi-vi-fi-can-tem qui ex Pa-tre Fi-li-o-que pro-ce-dit.
Qui cum Pa-tre et Fi-li-o si-mul ad-o-ra-tur et con glo-ri-fi-ca-tur qui lo-cu-ctus est per
Pro-phe-tas.
Et u-nam san-ctam ca-tho-li-cam et a-po-sto-li-cam Ec-cle-si-am.
Con-fi-te-or u-num ba-pti-sma in re-mi-si-o-nem pec-ca-to-rum.
Et ex-spe-cto re-sur-re-cti-o-nem mor-tu-o-rum.
Et vi-tam ven-tu-ri sae-cu-li.
A-men.

Sanctus

San-ctus, San-ctus, San-ctus,
Do-mi-nus De-us Sa-ba-oth.
Ple-ni sunt coe-li et ter-ra glo-ri-a tu-a.
Ho-san-na in ex-cel-sis.

Benedictus

Be-ne-di-ctus qui ve-nit in no-mi-ne Do-mi-ni,
Ho-san-na in ex-cel-sis.

Agnus Dei

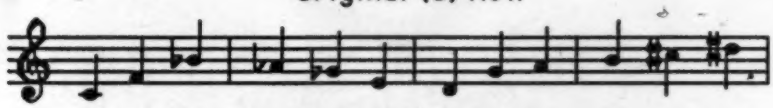
A-gnus De-i, qui tol-lis pec-ca-ta mun-di:
mi-se-re-re no-bis.
A-gnus De-i, qui tol-lis pec-ca-ta mun-di:
do-na no-bis pa-cem.

Analysis of Missa Serialis

Rows and Row Chains

This work is serial in pitch only. To select the pitches two rows have been used. They are named Original (O) Row and Sister (S) Row. The rows are segmented for compositional purposes. The rows are similar as each contains two pitch class sets which alternate. The S Row was derived from the O Row by contracting the series of whole tones found in the O Row to a series of semitones in the S Row. The two pitches not involved in the series of whole tones were used to fill out the Sister Row's twelve pitches. These two pitches were ordered such that the Sister Row contains two chromatic scales of five and seven pitches.

Original (O) Row

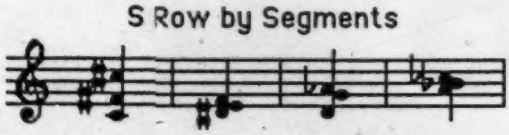


Sister (S) Row

Each row is used as an ordered series of four groups of three notes rather than as an ordered series of twelve pitches. The rows, as segmented, are similar in that they contain only two pitch class sets which alternate. The rows would be more practically referred to as:

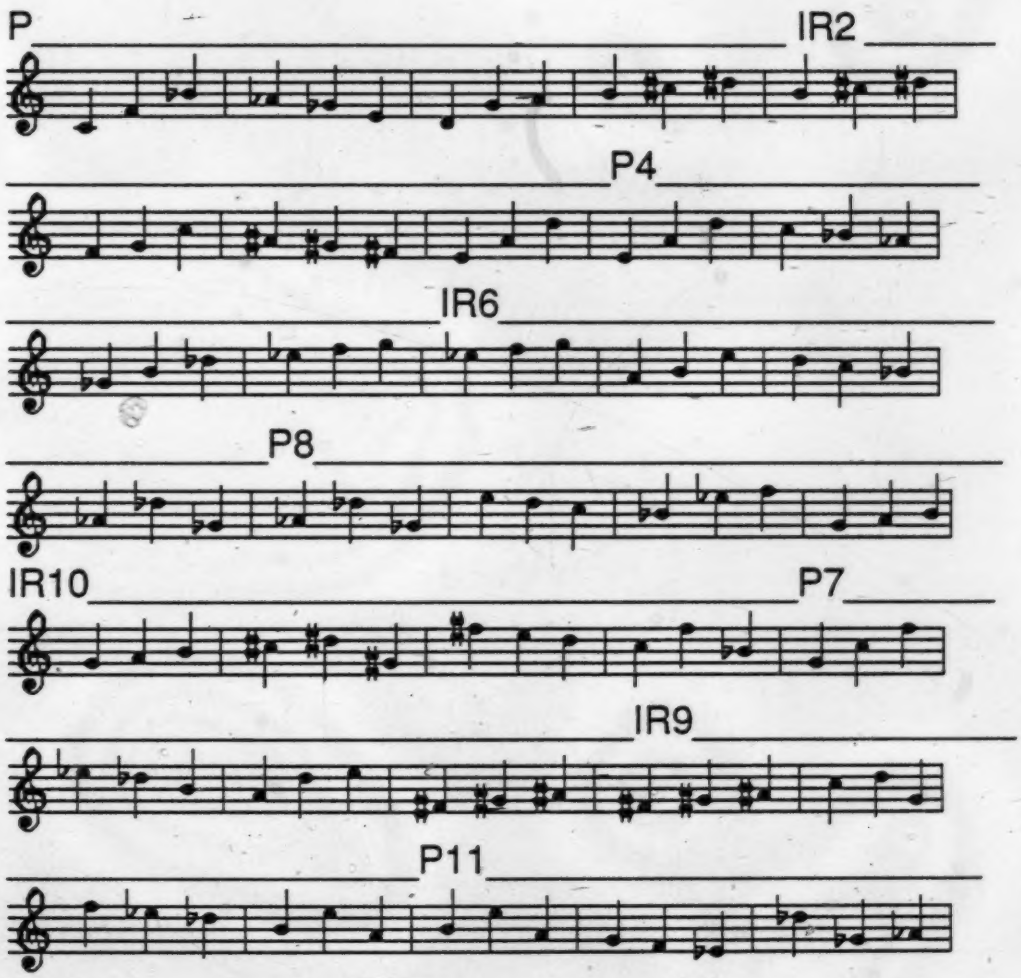
O Row by Segments

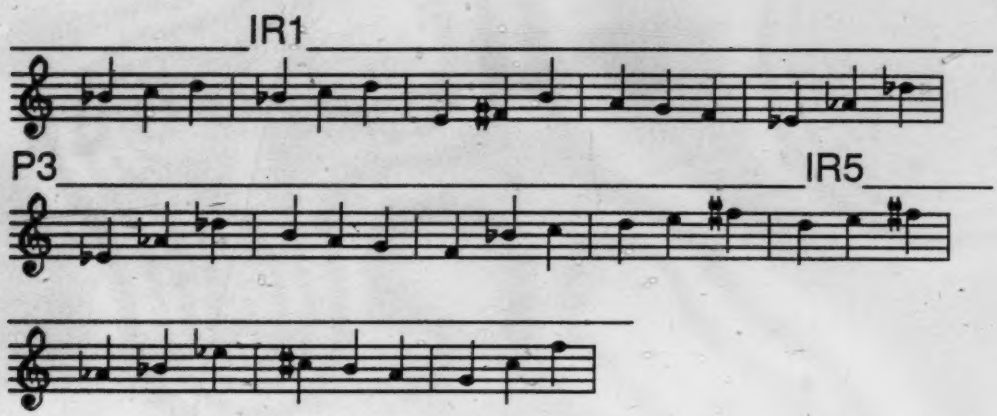
S Row by Segments



Two chains, the O Row chain and the S Row chain were constructed. To create the links the O Row chain overlaps by one trichord segment with the same row subjected to a row operation. The O Row chain uses the IR form and the P form of the row. The following example shows the chain used for that row.

O Row Chain





The chain breaks at P7. By following IR10 with P7 the chain is completed. These two rows are related in that the fourth segment of IR10 is an inversion of the first segment of P7 and they share two of their three pitches. A similar relationship exists between IR5 and P0, the end and beginning of the chain.

Allen Forte, in his book The Structure of Atonal Music (New Haven and London: Yale University Press, 1973), defines a method for naming collections of pitches such as the row segments used in this work. Pitch class sets can be named using Forte's system of nomenclature or by interval vector. For purposes of this analysis the interval vector is given followed, in square brackets, by Allan Forte's label for the pitch class set.

The distribution of pitch class sets within the chain is as follows:

Distribution of Pitch Class Sets within the O Row Chain

	020100 [3-1(12)]		010020 [3-9(12)]	
Reference*	Row(s) Containing	Total	Row(s) Containing	Total
A	IR5	1	P0	1
Bflat	IR6,P11,IR1	2**	IR5	1
B	P0,IR2,P7	2	IR6,IR9,P11	2
C	P8	1	P0,IR10,P3	2
Dflat	IR9	1	P4	1
D	IR10,P3,IR5	2	IR9	1
Eflat	P4,IR6,P11	2	IR10,IR1,P3	2
E	P0	1	IR2,P4,P7	2
F	IR1	1	P8	1
Gflat	IR2,P7,IR9	2	IR1	1
G	P8,IR10,P3	2	IR2,P7,IR5	2
Aflat	P4	1	IR6,P8,P11	2

* The reference is to the lowest pitch of the pitch class set when placed in its normal order.
**Note that two of the rows overlap hence two of the three occurrences are in fact the same.

To arrive at at a similar distribution of pitch class sets for the Sister Row a more compact chain proved feasible. The S Row chain links are created with a more complicated process whereby the 100011 [3-1(12)] pitch class set is linked to the 100011 [3-5] pitch class set in the succeeding row. This is done without regard to the two forms of that pitch class set found in the S Row. For convenience the two forms are designated T when the semitone is found between the upper two pitches (assuming that the three pitches are arranged in their most compact form through the principal of octave equivalence) and B when the semitone is found between the bottom two pitches. This linking process is not strict in that the links are made by means of the 100011 [3-1(12)] pitch class sets with the T version substituted for the B version or the reverse. For example between IR6 and IR8; B flat, D sharp, E could be substituted for B flat, C flat and E. During the work this distinction is blurred with the T and B forms used interchangeably. The linking process in the Sister Row chain may seem strained. A simple auditory test will demonstrate the close relationship of the two forms of 100011 [3-1(12)] hence the possibility of substitution to create range organization of pitch. The serialization of

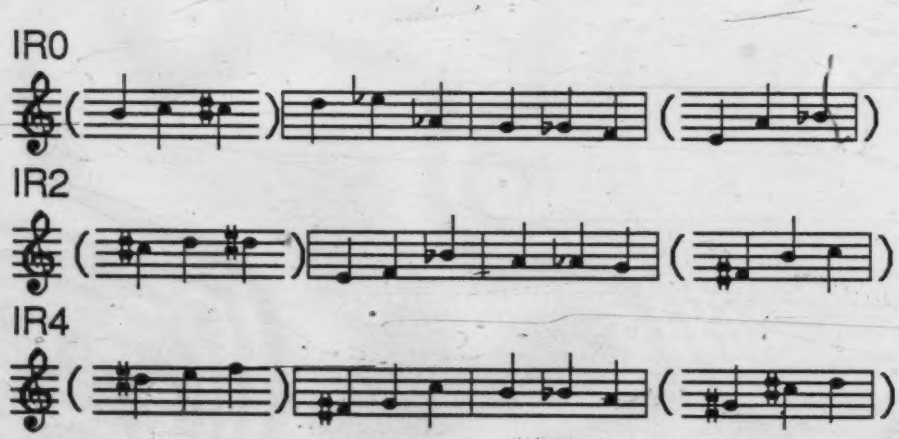
pitch is a chain of harmonies rather than single notes. Only by making this flexible link is the creation of a chain giving the desired distribution of pitch class set transpositions possible. The following is a chart of that distribution.

Distribution of Pitch Class Sets within the Sister Row Chain

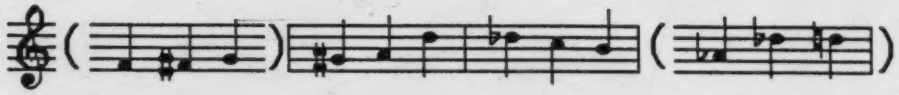
	210000 [3-5]	100011 [3-1(12)]
Reference	Row(s) Containing	Row(s) Containing
A	IR4	P9
Bflat	P7	IR8
B	IR6	P11
C	P9	IR10
Dflat	IR8	P1
D	P11	IR0
Eflat	IR10	P3
E	P1	IR2
F	IR0	P5
Gflat	P3	IR4
G	IR2	P7
Aflat	P5	IR6

The chain used to obtain this distribution is given below. The bracketed sections are the row segments which are part of the rows but not within the chain. They are used when the row is repeated or when a different form of pitch class set 100011 [3-1(12)] is substituted.

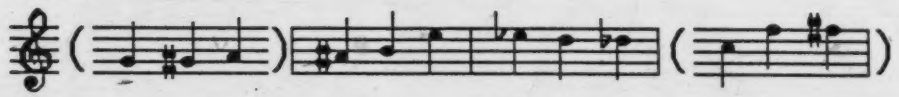
S Row Chain



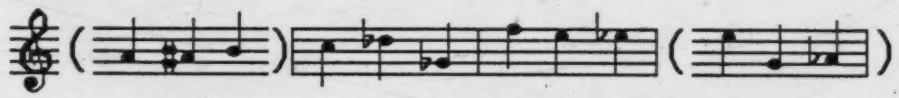
IR6



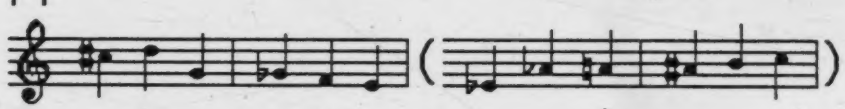
IR8



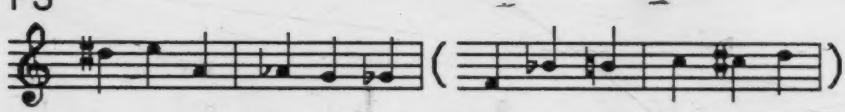
IR10



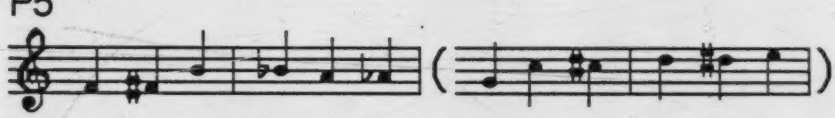
P1



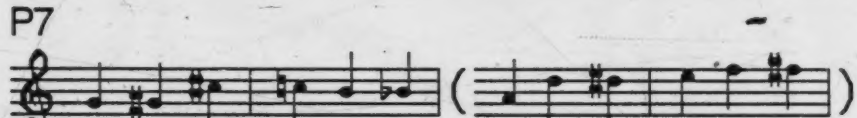
P3



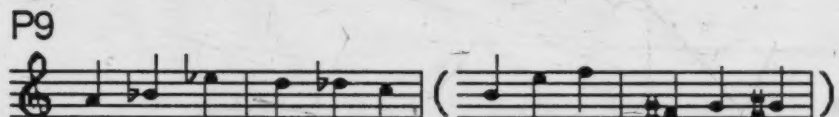
P5



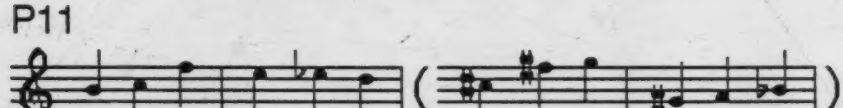
P7



P9



P11



At the mid-point of the chain, the link between IR10 and P1, the fourth rather than the tritone forms the common notes of the pivot between 100011 [3-1(12)] pitch class sets. C sharp, D, G substitutes for the D, G, A flat normally found in IR10.

The rows are used according to the following rules. Each complete row may be repeated as

many times as desired before going on to the next row. Two or more adjacent row segments may be sounded simultaneously. Any segment may continue in use while the chain continues to unfold in other voices. The integrity of the row segments is maintained in that one may repeat and reorder at will only within a segment. The voices may exchange row segments at will. Row segments may be produced when notes are held to overlap.

The chain of rows must be completely stated. For example having left IR2 all rows in the ordered chain must be stated before one can state IR2 again.

A chain may be left at any point to use the other chain. Upon return one must ensure the distribution of pitch class sets by starting where the chain left off. The chains may also operate simultaneously.

The piece contains two parallel serializations of pitch which are useful to give dramatic contrast and a sense of form. When a chain is completed it restarts; thus all pitch is ordered.

Harmony

The important features of the harmony are contrasts between one row chain and the other: harmonic zone and harmonic zone. These two harmonic characters have within them sub-characters ranging, in the O Row, from the reflective "Kyrie Eleison" to the militant "Sanctus." The general harmonic climates define two ranges of expression. The plaintive character of the "Agnus Dei" would be difficult to express using the O Row while the "Gloria" would not be appropriate to the S Row.

Within the chains manipulation of harmonic rhythm and density is used. Slow and regular harmonic movement is contrasted with abrupt and asymmetrical movement as between the 'Kyrie Eleison' and 'Christe Eleison' settings in the "Kyrie." Harmonic movement may be suspended and then resumed as in "Gloria" bars 24-27. Phrases may be given shape as in the first eight bars of "Agnus Dei" by first accelerating, then retarding the harmonic rhythm.

The harmony can be made more dense as segments are held over while new ones are

introduced. "Agnus Dei" bars 15-16 illustrates a sharp contrast in density.

The following is a summary of the row chain use. The breaks between completed chains are often trivial events when the chain is repeated immediately.

Row Chain Summary

Kyrie

Bars	Row Chain	From Row	To Row	Total Chains
1-11	O	P0	IR10	(1/2 O Chain)
12-30	S	IR10	IR10	1 S Chain
30-52	S	P1	IR10	2 S Chains
53-61	O	P7	IR10	1 O Chain
62n-77	O	P0	IR5	2 O Chains

Gloria

1-27	O	P0	IR5	3 O Chains
27-50	O	P0	IR5	4 O Chains
50-66	O	P0	IR5	5 O Chains
66-88	O	P0	P7	(5 1/2 O Chains)

Credo

1-11	S	IR10	P3	
5-7	O	P7	IR9	
12-25	O	IR9	P0	6 O Chains
14-25	S	P5	S11	
26-35	O	P0	P4	
36-43	S	IR0	IR4	
44-48	O	IR6	O8	
49-68	S	IR6	IR10	3 S Chains
61-72	O	P7	IR9	
73-76	S	P1	P3	
77-80	O	IR9	O11	
81-82	S	P5		

Sanctus

1-16	O	P11	IR5	7 O Chains
16-60	O	P0	P3	
61-72	S	P7	IR8	
73-77	O	P3	P0	8 O Chains
77-82	O	P0	P8	

Agnus Dei

Bars	Row Chain	From Row	To Row	Total Chains
1-11	S	IR10	IR6	4 S Chains
12-25	S	IR10	IR6	5 S Chains
26-34	S	IR10	P11	(5 1/2 S Chains)
31-49	O	P8	P7	(8 1/2 O Chains)

Thematic/Motivic Organization

The thematic/motivic organization of the work is a product of its predetermined pitch content in interaction with the expression implied by the text and the composer's interpretation of that text.

In Missa Serialis the relative importance of the various motifs can be seen from different perspectives, those more important to this Mass as a whole, and those of local importance. The themes can be grouped by similarities which can be perceived by the listener. These groups can be more broadly characterized as being derived from one or the other row. The construction of a motif/theme is seen as including factors such as placement in relation to the meter, orchestration, articulation, dynamic level, tempo. The manipulation of themes/motifs through their variation, repetition, placement in relation to other themes, and association with particular sentiments expressed in the text is important to this work.

The thematic/motivic divisions which follow are those created by many factors and cannot be viewed as being other than a somewhat arbitrary division. For example, the brief musical punctuation marks in the "Gloria" could introduce or conclude the phrases they divide. Although it is difficult to place exact lines of demarcation between sections it is done to describe the work in an orderly fashion.

The themes/motifs are named for the movement and bar in which they can be found. When two significant themes are found in the same bar they are designated 'a' and 'b.' The movements are placed in quotation marks which helps distinguish them from the theme names. When sections of the text are quoted they are placed in single quotation marks to avoid confusion.

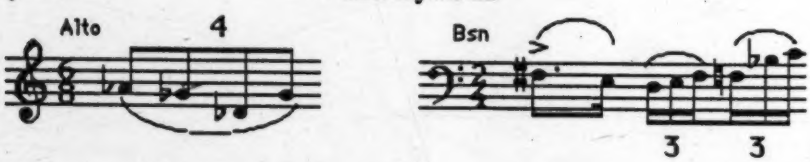
Kyrie

Section	Sub-section	Sub-sub-section
1-12		
13-53	13-18	
	19-38	19-24
		25-30
		31-38
	39-53	39-44
		44-47
		47-51
		51-53
54-77	54-57	
	58-63	
	64-77	

The "Kyrie" contains three sections. Bars 1-12, 13-53 and 54-77. The O Row is used in 1-12 and 54-77. The themes:

Kyrie 1

Kyrie 9 and **Kyrie 12**

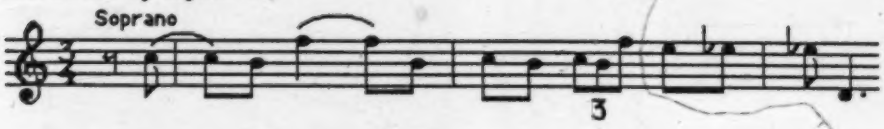


characterize these two sections. The section 13-53 uses the S Row.

The sub-section 13-38 is characterized by

Kyrie 15

and 39-53 by **Kyrie 43.**



The section as a whole uses episodic material from

Kyrie 18 and **Kyrie 42**

to frame the statements of the two themes. Kyrie 43 is of long range importance, although within the "Kyrie" alone this is not so apparent.

Kyrie 68

foreshadows Gloria.

The Kyrie 15 theme, derived from O Row, not S Row, is augmented in bars 69 -76 after the return of the O Row. This helps create a feeling of closure within the "Kyrie" and places the Kyrie 15 theme as the important one in this movement.

The "Kyrie" is a straight forward movement where changes between O and S Rows coincide with the formal sections. The words 'Kyrie Eleison' are associated with a rather dispassionate mood derived from O Row in contrast with the more passionate pleading of 'Christe Eleison' derived from S. The ABA form is obvious. Superimposed on this is an arch created by density of orchestration and dynamic level.

Gloria

Section	Sub-section	Sub-sub-section
1-31	1-12	
	13-20	
	20-28	
	29-37	29-31
		31-37
38-73		38-43
		44-49
		50-52
		52-57
		58-61
		62-68
		68-72
73-80		
81-88		

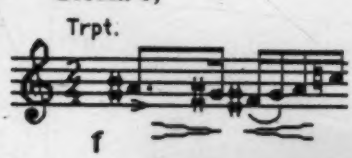
The "Gloria" uses the O Row exclusively. The density of orchestration and volume creates an inverted arch with bars 31-47 forming the 'valley'.

The "Gloria" begins with a section bars 1-12 using

Gloria 3

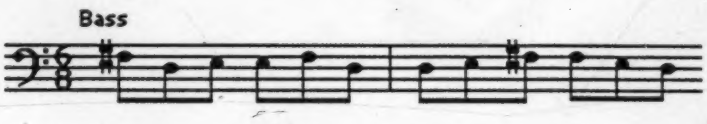
Gloria 2,

Gloria 6,



Gloria 9,

Gloria 10,

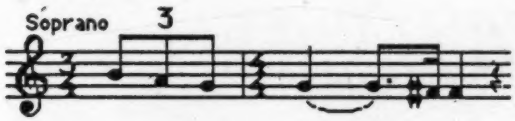


Gloria 12.

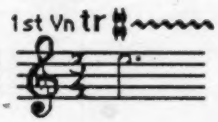
The Gloria 3 theme is similar to Kyrie 1 however, the difference in articulation, rhythm, tempo and the reordering of the last segment to eliminate the melodic tritone gives the Gloria 3 a more joyful effect.

The following section, 13-20, is characterized by

Gloria 13a,



Gloria 13b,



Gloria 16,

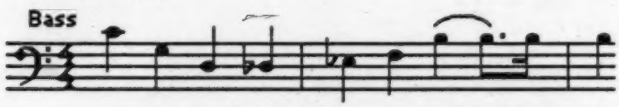
Gloria 17,

and uses **Gloria 19** a variant of Gloria 2.

All these themes are important to the Mass as a whole and make appearances in prominent positions later in the work.

The section 20-28 is characterized by

Gloria 20



and **Gloria 25** which is related to Gloria 10.

The section 28-34 uses **Gloria 28** a variant of Gloria 17,

and Gloria 29 which is derived from Gloria 13, as is the 'Adoramus te. glorificamus te' setting of bars 31 -34.

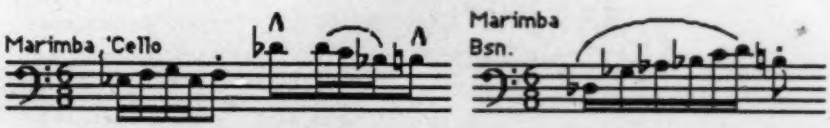
Bars 1-31 form a large section corresponding to the exposition of a sonata form. The punctuation into clear segments marked by wedge shaped phrases, 4 in all, creates the illusion of an exposition followed with the extreme change in dynamics in bars 31 to start a "development."

Bars 31-72 form a wedge through a combination of increasing density and upward moving melodic patterns. It is this sense of upward motion arriving at bar 68 that unifies the section, although new thematic and motivic material is introduced within it.

Over this broad melodic movement are various sub-sections with their themes. Bars 31-34 use a variant of Gloria 13, bars 34 to 36 use

Gloria 34, and bars 35-47 use **Gloria 38,**

Gloria 44, and **Gloria 45.**

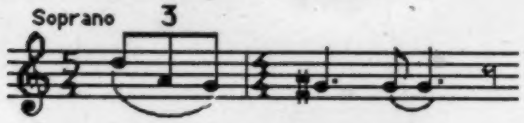


At bars 48-49 an important theme,

Gloria 48

is introduced which will appear prominently later in the work. From this point various melodic materials already used are treated in a fragmented fashion. At bars 68-72 material,

Gloria 68, associated with Gloria 13,



is used literally and is scored differently from the original Gloria 13.

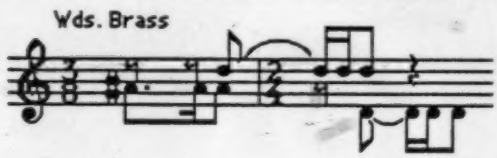
Gloria 74

represents a small development of Gloria 16 which helps prepare the "Sanctus."

At bar 72 the upward motion is broken and a literal, though shortened, version of Gloria bars 3-12 forms a section corresponding to the recapitulation in a sonata form.

Bars 81-88 form a coda built around a melodic move from B natural (see bar 81 in the trumpet and soprano) to A sharp in bar 88.

Gloria 83, derived from Gloria 2, embellishes this melodic move.



Credo

Section	Sub-section	Sub-sub-section
1-26	1-7	
	8-13	
	14-21	
	21-26	
27-60	27-38	
	38-48	38-43
		43-48
	49-60	
61-82	61-68	
	69-72	
	73-79	73-77
		77-79
	79-82	

The Credo uses both rows and overlaps them thus forming vertical aggregates not available within the two separate rows. The harmonic rhythm is slow. This produces, in conjunction with a prominence of regular eighth notes, a meditative quality punctuated by the 'Crucifixus' setting in bar 36.

The movement falls into three large sections, bars 1-26, 27-60, and 61-82.

Bars 1-26 contain sub-sections . Bars 1-7 characterized by

Credo 2,

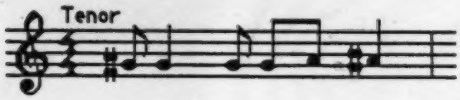
Credo 6, **Credo 7.**

Bars 8-13 use Credo 8,

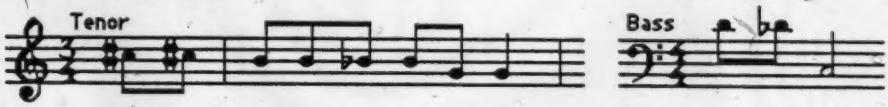
a variation of Credo 2 and Credo 12.

Bars 14-21 use **Credo 14a,** **Credo 14b** and

Credo 15 a variation of Credo 2.



Bars 21-26 introduce **Credo 21** and **Credo 25** a figure which was



originally part of Kyrie 43, and ends with

Credo 26 a figure from Gloria 34.

These sub-sections can be considered a section because they express a similar subdued, contemplative mood in one tempo.

The second section is built around a melodic outline of four whole tones beginning on G sharp and ending on D in bar 27 'Crucifixus'. This is followed by a sub-section bars 38-49 which contains material from Kyrie 15 in bars 38-43 and the important Gloria 48 and Gloria 13 themes associated with 'Resurrexit' in bars 44-48. In bars 49-60 the melodic outline of G sharp to D is repeated using different melodic material. This sub-section makes use of regular eighth notes to create the impression that judgment day comes closer inexorably.

In bar 61 the "Credo" returns to its meditative mood. Bars 61-68 parallel closely "Credo" bars 2-7. Bars 69 to 72 play out the thematic material of bar 7. Bars 73-79 parallel "Credo"

bars 8-13. Within bars 78-79 the setting of 'Et exspecto resurrectionem mortuorum' recalls the previous use of the same texture and melodic material in "Credo" bars 12-13 thereby implying that the reward for belief is eternal life. Bars 79-82 form a brief winding down of the eighth note motion to close the movement.

Sanctus/Benedictus

Section	Sub-section	Sub-sub-section
1-16	1-2	
	3-6	
	7-10	
	11-16	
17-51	17-22	17-19
		20-22
	23-35	23-25
		26-28
		29-30
		31-35
	36-52	36-41 (36-38,39-41)
		42-44
		45-52 (45-47,48-52)
53-61		
62-73 (Benedictus)		
74-82	74-77	
	78-83	

The "Sanctus/Benedictus" does not stand as a separate movement with its own inner logic creating a sense of closure. The O Row is used in the "Sanctus" and the S Row is used with the "Benedictus" except for the setting of 'Hosanna in excelesis' which uses the O Row.

The sections are 1-16, 17-52, 53-61, forming the "Sanctus;" 62-73 and 74-83 forming the "Benedictus." Bars 1-16 are an introduction using material associated with Gloria 10 and material in

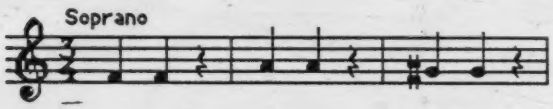
Sanctus 4, which is associated with Gloria 9.

Sanctus 3, which was prepared in Gloria 74 and Gloria 16

plays a prominent role here.

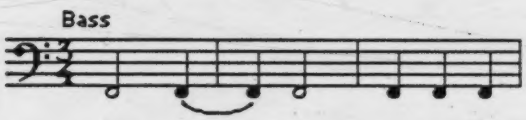
The thematic material in bars 61-72 uses

Sanctus 17a,



Sanctus 17b,

Sanctus 26



with the figure found in Sanctus 3 echoed in the two note motif of Sanctus 17a.. The effect is one of a trope of the "Gloria;" taking material from it and developing that material from the joy of the "Gloria" to a militant expression of faith in the "Sanctus."

The section 53-61 contains a more literal return to the "Gloria." The narrative changes at bars 53 directing itself to praise meant for God rather than militant affirmation of faith directed to other mortals.

This is followed by the the "Benedictus" and the abrupt introduction of the S Row. The pleading associated with Kyrie 15, the source of that section's thematic material, characterizes this section.

In bars 74-83 the O Row and Gloria themes are restored to set 'Hosanna in excelsis'.

A brief coda, scored for winds parallels "Sanctus" 52-61 and is thinly scored to refute any sense of finality.

Agnus Dei

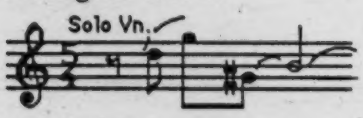
Section	Sub-section	Sub-sub-section
1-35	1-12	1-7
		8-12
	12-17	
	18-25	18-19
		20-23
		24-25
	26-35	26-27
		28-31
		31-35
36-49	36-41	
	41-46	
	47-49	

The "Agnus Dei" can be broadly described as containing two sections, bars 1-35 and 36-49.

The first section uses the S Row, with the O Row introduced in bar 31 to create a transition to the second section. The first section forms an arch with bars 16-17 creating the high point. This section contains subdivisions beginning with bars 1-7 using

Agnus Dei 1,

and **Agnus Dei 2**



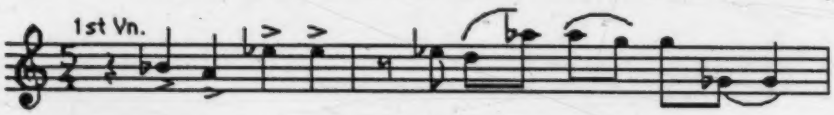
followed by a melodic outline of four whole tones G, A, B and C sharp beginning with the Cello in bar 5. The flute and oboe pick up the note A from the vibraphone figure

Agnus Dei 5a and carry on with a "Credo" like figure, **Agnus Dei 5b,**

to bar 7. **Agnus Dei 5c**

figures embellish this melodic motion.

In bar 8 a new phrase begins with **Agnus Dei 8** which is derived from Agnus Dei 1.



Agnus Dei 11, derived from Kyrie 12, carries the phrase to bar 12.

Bars 12-19 begin with **Agnus Dei 12a** which is derived from Agnus Dei 1,

followed by **Agnus Dei 13a** and **Agnus Dei 13b**

which are reminiscent of the last part of Agnus Dei 1. The accompaniment figure, Agnus Dei 12b, is a development of **Agnus Dei 5b.**

In bars 15-17 **Agnus Dei 15** which related to Kyrie 43,

is used with **Agnus Dei 16**, related to Gloria 25, added as a pedal.

This is a important thematic event as it is a restatement of the most important S Row theme and creates formal closure in the treatment of the S Row.

The sub-section bars 18-25 uses material from Agnus Dei 1 in bars 18-19, from Agnus Dei 5b in bars 20-23, and from Agnus Dei 1 in bars 24-25.

Bars 26-31 represent a more literal return to the material and mood of the beginning of the "Agnus Dei". The introduction of **Agnus Dei 29**, related to Agnus Dei 11,

creates the expectation of a dense, passionate mood reminiscent of "Agnus Dei" bars 13-17. This is refuted by return to the O Row chain with the statement of

Agnus Dei 31.

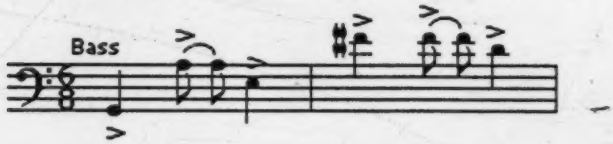
The S Row lingers on to bar 34 as the O Row assumes prominence. Bar 34 includes a statement of the important

Agnus Dei 34 theme which is associated with Gloria 48.

Bar 36 changes the character of the "Agnus Dei." For the section bars 36-46 accompaniment figures are drawn from material associated with Gloria 10.

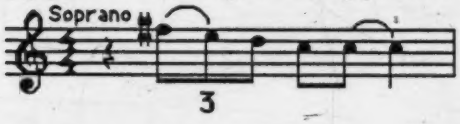
The sub-section bars 36-41 builds to the statement of

Agnus Dei 40, derived from Agnus Dei 34.



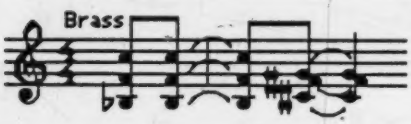
The sub-section 41-46 carries this material forward and

Agnus Dei 44, a figure strongly reminiscent of Gloria 13, is introduced.



The Gloria 13 figure is played out from bar 44 to conclude with the B natural in bar 48.

The **Agnus Dei 43** motif echoes Gloria 83



and embellishes the playing out of Gloria 13.

The piece finishes with the sub-section 47-49. The restatement of Gloria 13 overlaps into this sub-section and a final cadence-like bar ends the work.

Long Range Thematic/Motivic Relationships

The importance of particular themes creates a thematic structure on the level of the whole Missa Serialis.

The reintroduction of Gloria 13 and Gloria 48 at the end of the "Agnus Dei" makes clear their importance as motifs which help tie the work together. The words associated with these

themes, 'Resurrexit' at "Credo" 44-46, 'Dona Nobis Pacem ' in the "Agnus Dei," 'Domine Deus Rex Coelestis' in the "Gloria;" impart a glorious character to the Mass as a whole.

The most dominant of the S Row themes is Kyrie 43. This theme comes to represent the pleading of the supplicant and reappears in "Agnus Dei" bars 15-17. Since it does not occupy the position of prominence that the important O Row themes do it sums up the subordinate position of the S Row.

Missa Serialis

Kyrie
Gloria
Credo
Sanctus
Agnus Dei

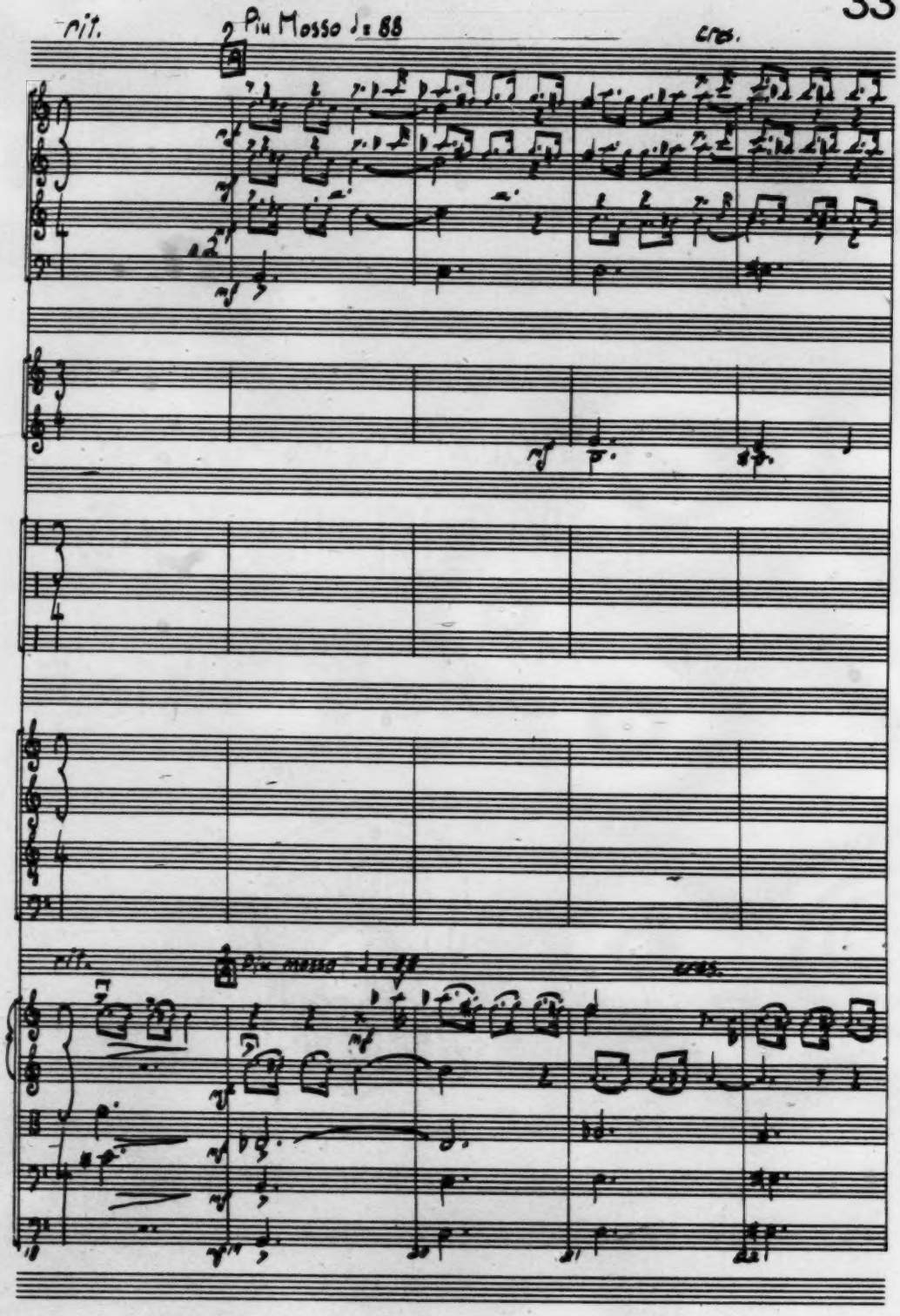
for

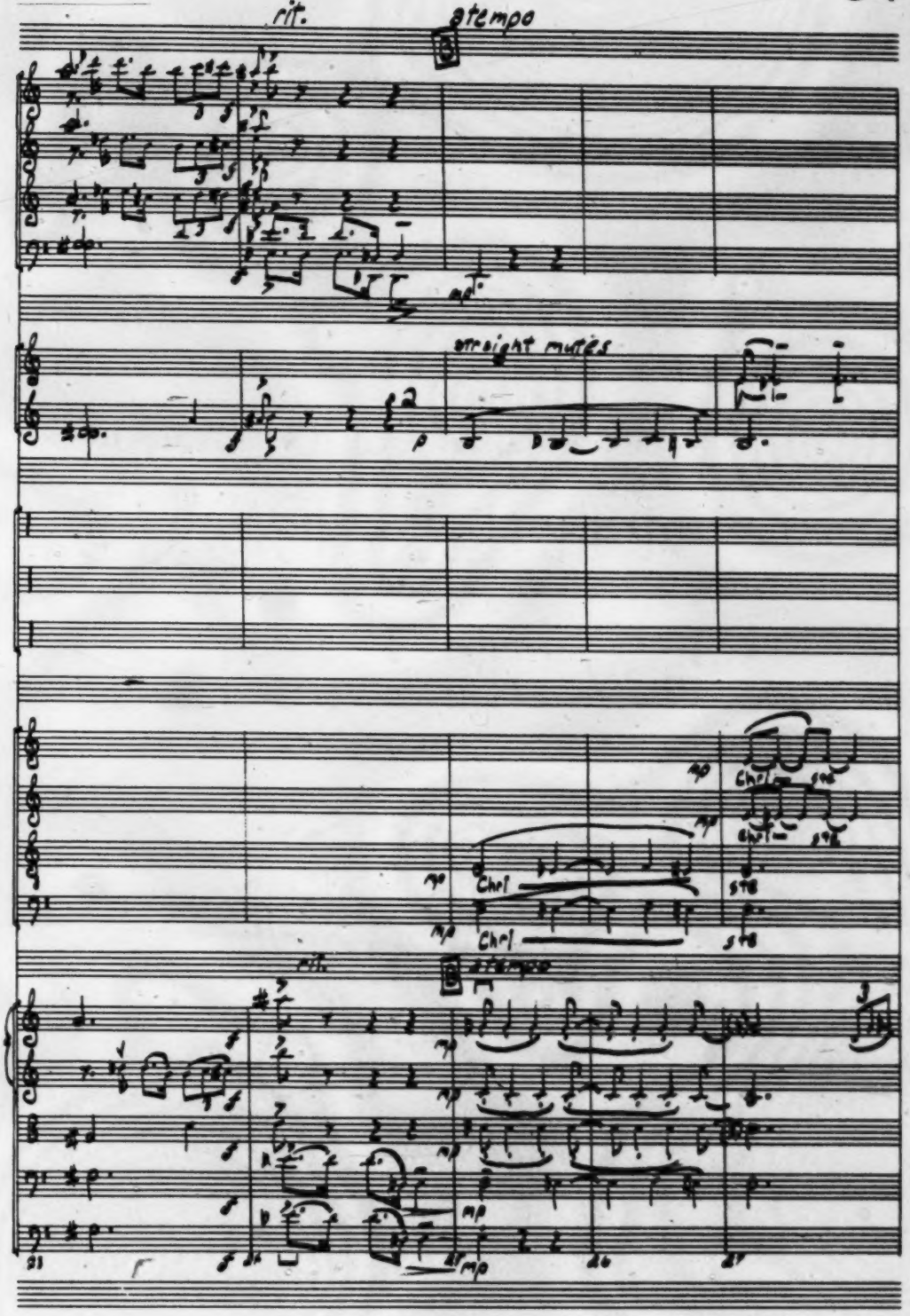
Flutes 1 and 2
Oboes 1 and 2
Clarinets in B♭ 1 and 2
Bassoons 1 and 2
Trumpets in C 1 and 2
F Horns 1 and 2
Percussion I : Triangle, Finger Cymbals, Suspended Cymbal, Snare Drum.
Percussion II : Piccolo Snare, Temple Blocks (4), Sleigh Bells, Snare Drum, Finger Cymbals, Glockenspiel, Chimes.
Percussion III : Timpani, Xylophone, Glockenspiel, Chimes, Marimba, Vibraphone, Bass Drum.
Choir SATB
Strings

Moderato ♩. = 52 alla salmo
rit.
Fl 1 2
Ob 1 2
Cl in B♭ 1 2
Bsn 1 2
Tpt in C 1 2
F Hn 1 2
I
Perc. II
III
Sop.
Alto
Ten.
Bass
Ky ri - e e - le - i - son
Moderato ♩. = 52 alla Salmo
rit.
Vn I
II
Vla
Vc
Cb

a Tempo
Ky - ri - e - le - i - son
a tempo
mp
mp
mp
4 Accidentals are effective in the written octave only
for the remainder of the bar and do not carry over.

Poco più mosso ♩= 70
♩=♩ accel. ♩=♩
mp chri- stus
Poco più mosso ♩= 70
accel.
non div.
div.
sim.
mp

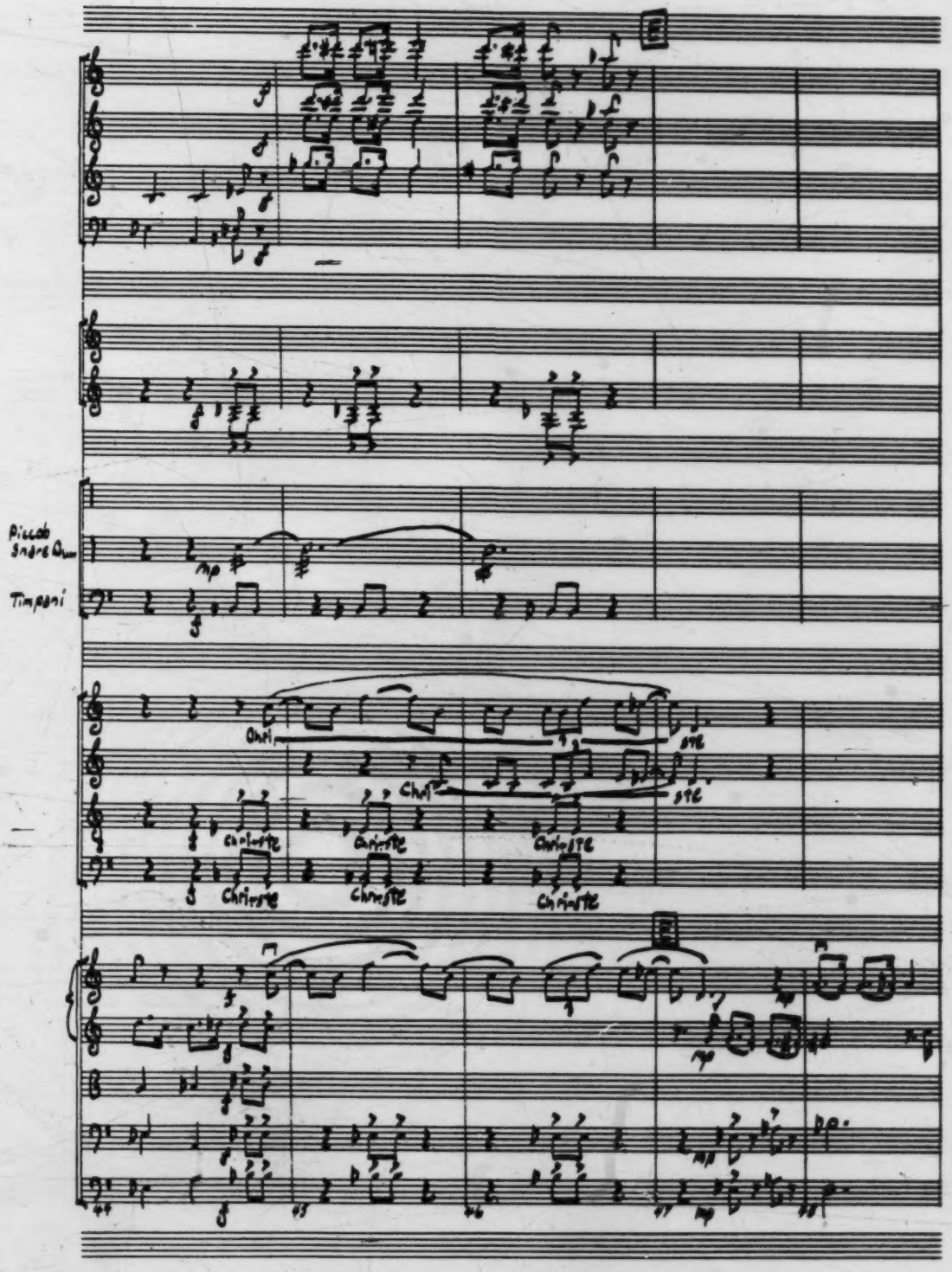

rit.
Più Mosso ♩= 88
cres.
rit.
Più mosso ♩= 88
cres.


rit.
a tempo
straight mutes
mp
Chrl
stb
rit.
a tempo
mp
dimp

Solo Vc
Vc
38
39
30
31

rit.
open
rit.

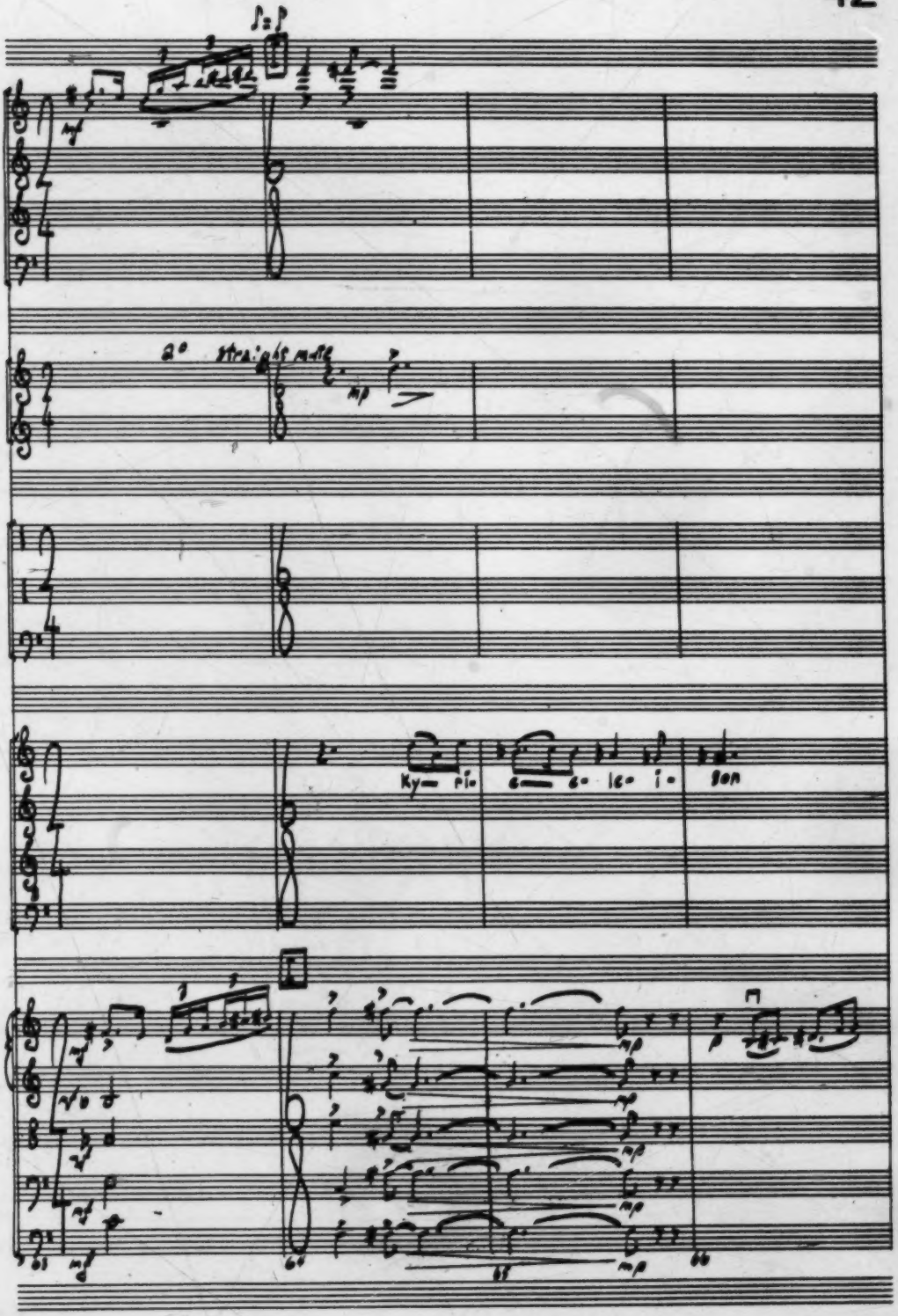
a tempo
Piccolo Snare Drum
Timpani
a tempo
Vn
Vc
Cb


Piccolo
Snare Drum
Timpani
Chri-ste
Chri-ste
Chri-ste
Chri-ste
Chri-ste
Chri-ste
Chri-ste
Chri-ste
Chri-ste

rit.
cres.
Piccolo
Snare Drum
Timpani
Cymbals
rit.
cres.
cres.
cres.
cres.

Pesante ♩.= 52

Ky— ri- e e— le— i- son—

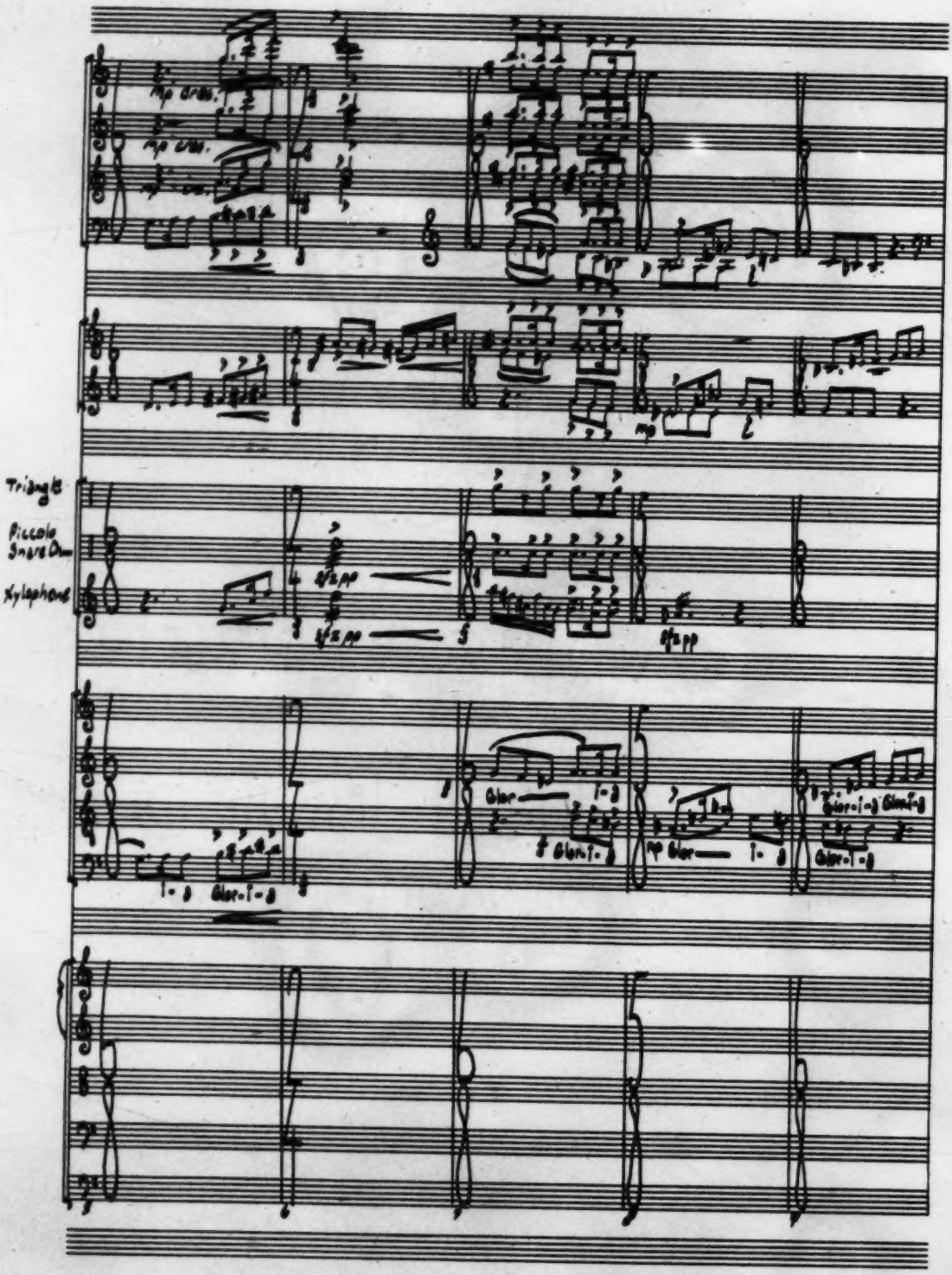

2° strings mute
Ky— rie— e— le— i— son

Ky.
H.
Ky.
H.

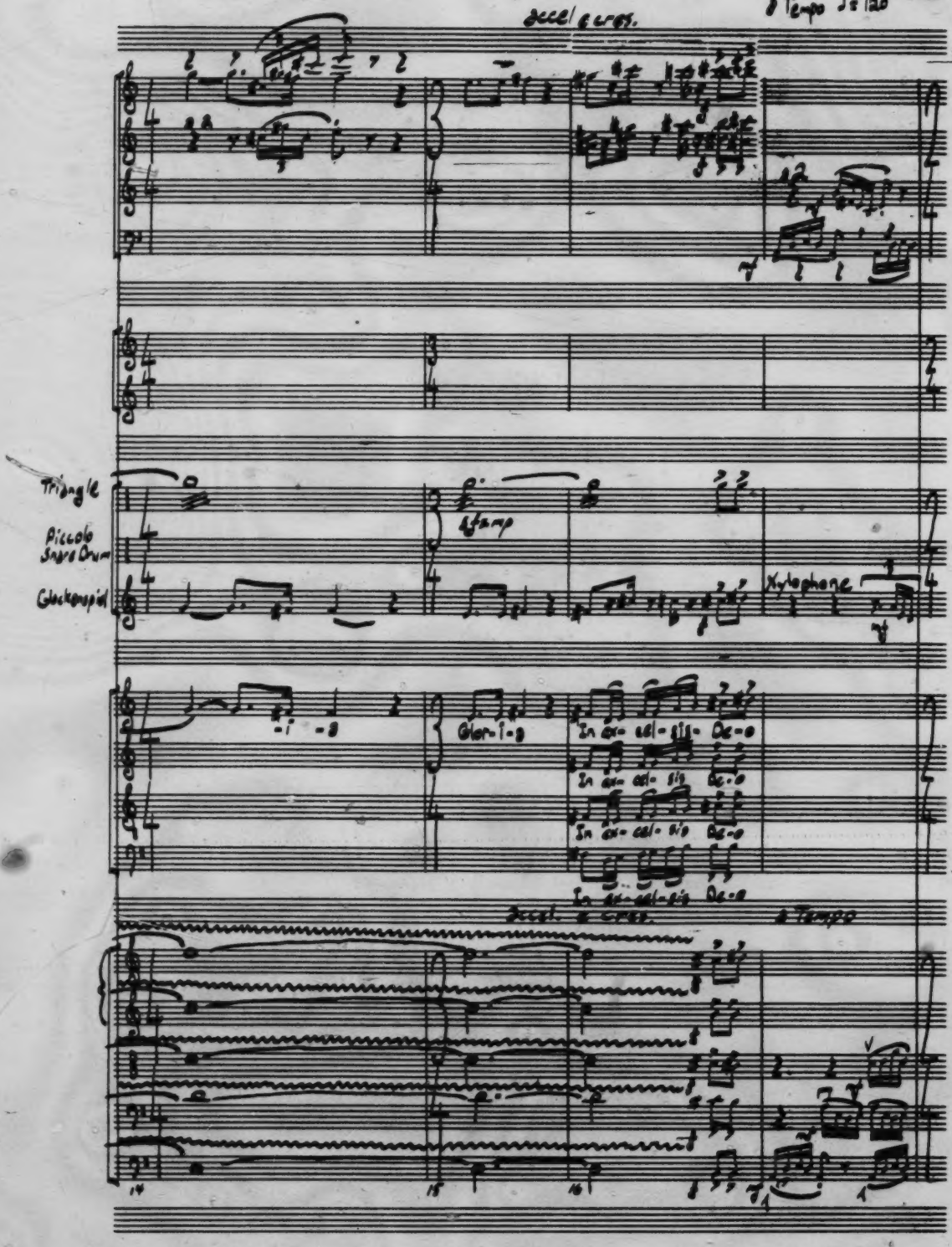
pp
pp
pp

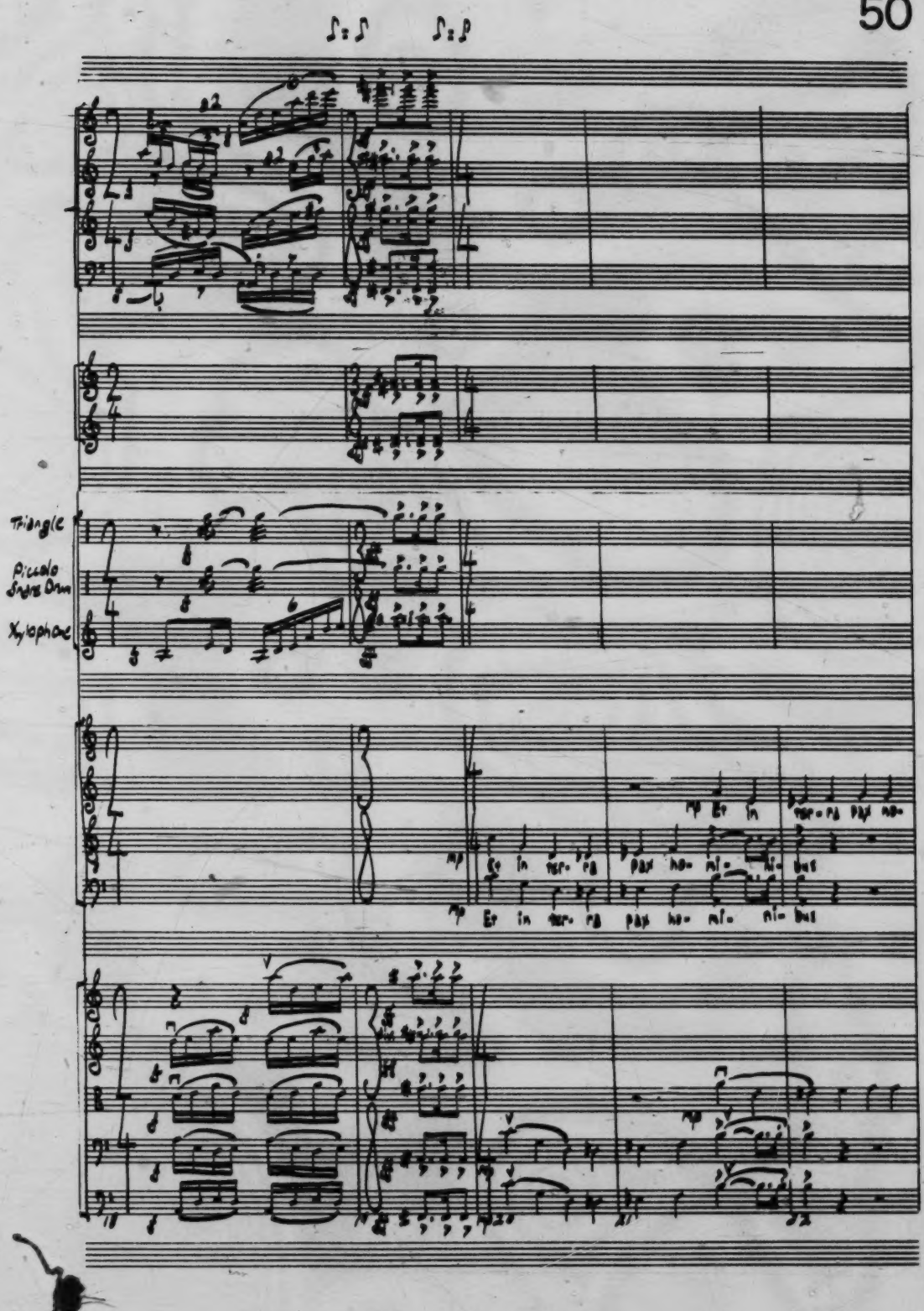
rit.
rit.

Vivace ♩.=82
Fl. 1 2
Ob. 1 2
Clin B♭ 1 2
Bn. 1 2
Tpt. in C 1 2
Hn. in F 1 2
Triangle
Piccolo snare
Perc. I II III
xylophone
Sop.
Alto
Ten.
Bass
Glor- i- a
Glor- i- a
Glor — i- a Glor —
Vivace ♩. =82
Vn. I II
Vla.
Vc.
Cb.


Triangle
Piccolo
Snare Dr.
Xylophone

cres.
Meno Mosso
Triangle
Piccolo
Snare Drum
Xylophone
Glockenspiel
Clar.
cres.

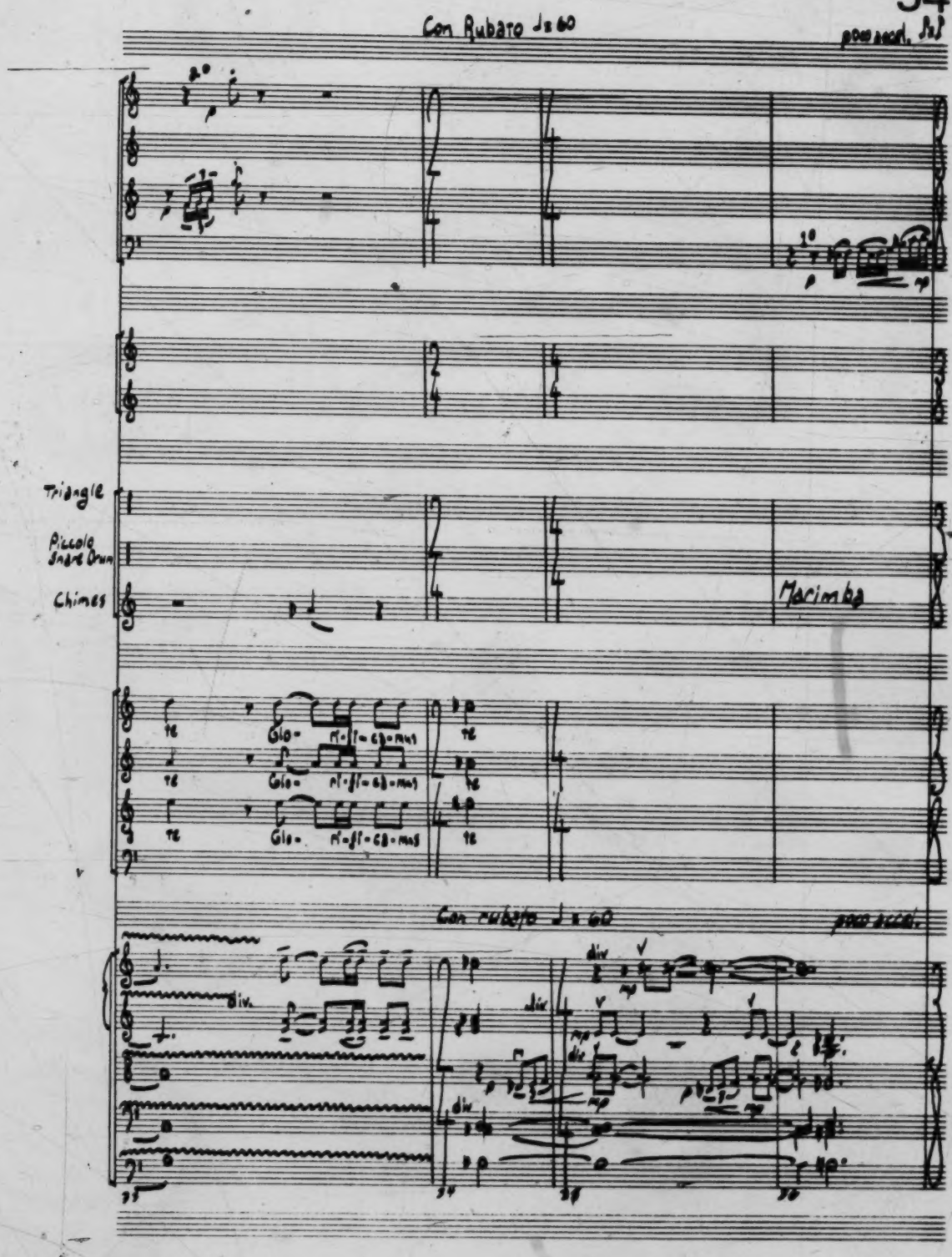

accel. e cresc.
a Tempo ♩= 120
Triangle
Piccolo Snare Drum
Glockenspiel
4 tamp
Xylophone
Glori-a
In ex-cel-sis De-o
In ex-cel-sis De-o
In ex-cel-sis De-o
In ex-cel-sis De-o
accel. e cresc.
a Tempo


Triangle
Piccolo
Snare Drum
Xylophone
mp Et in ter- ra pax ho- mi- ni- bus
mp Et in ter- ra pax ho- mi- ni- bus

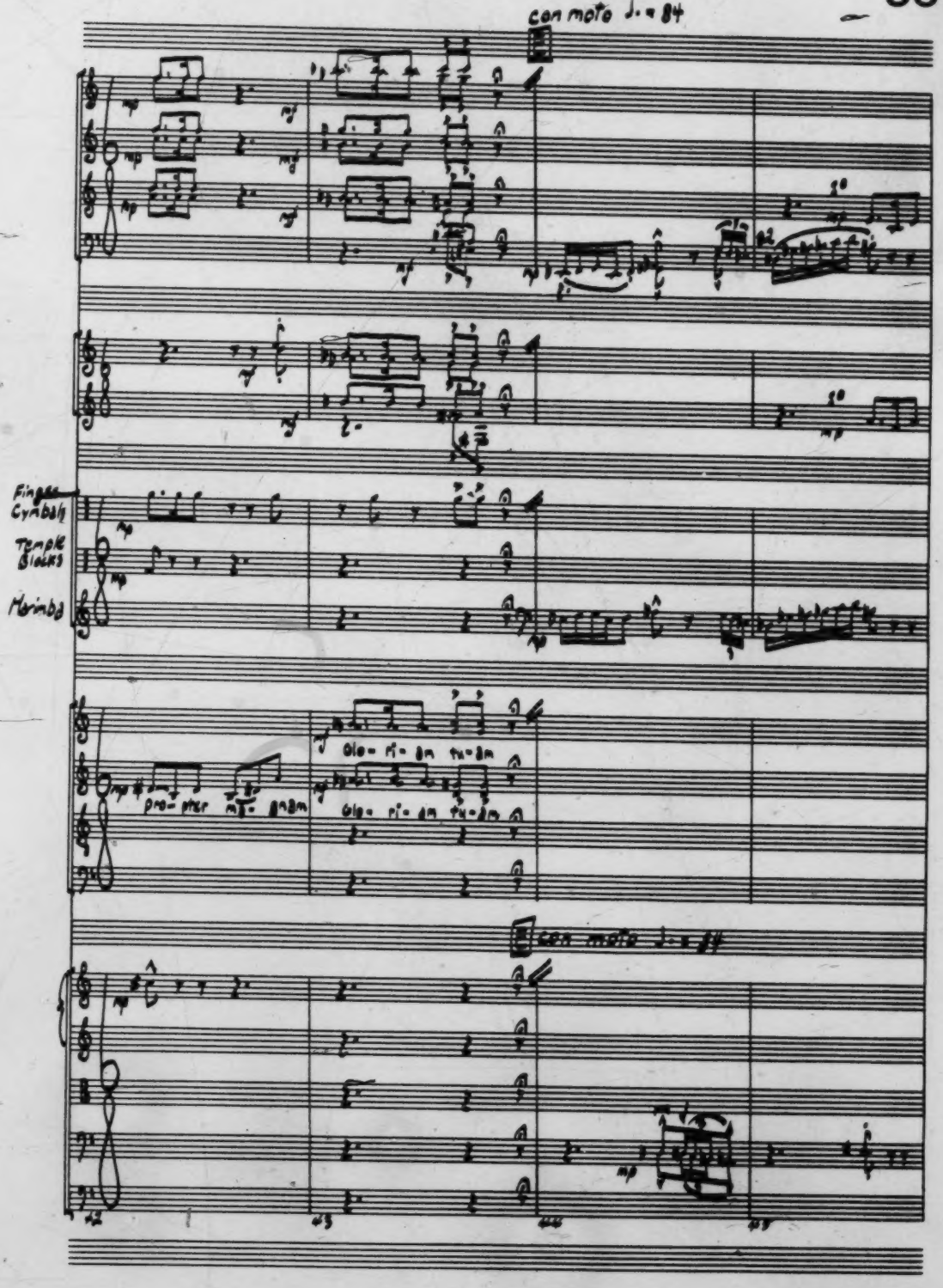
Triangle
Piccolo Snare Drum
Xylophone
poco marcato
poco marcato
mi- ni- bus
ter- ra pax ho- mi- ni- bus
bo- nae bo- nae
poco marcato
21
24
25
26

Pesante ♩= 96
(Triangle)
Triangle
Piccolo
Snare Drum
Xylophone
Chimes
Pesante ♩= 96

* Fall, a short glissando ascending on a definite pitch, in this case the fall takes 1/8 a beat.


Con Rubato ♩= 60
poco accel. rit
Triangle
Piccolo Snare Drum
Chimes
Marimba
Con rubato ♩ = 60
poco accel.
div.
div.
div

Lively ♩. = 80
Finger Cymbals
Temple Blocks
Marimba
Lively ♩. = 80


con moto ♩. = 84
Finger Cymbals
Temple Blocks
Marimba
pro- per mal- lets
con moto ♩. = 84

Meno mosso ♩ = 104
Finger Cymbals
Temple Blocks
Marimba
Do- mi- nus Do- mi-
Meno mosso

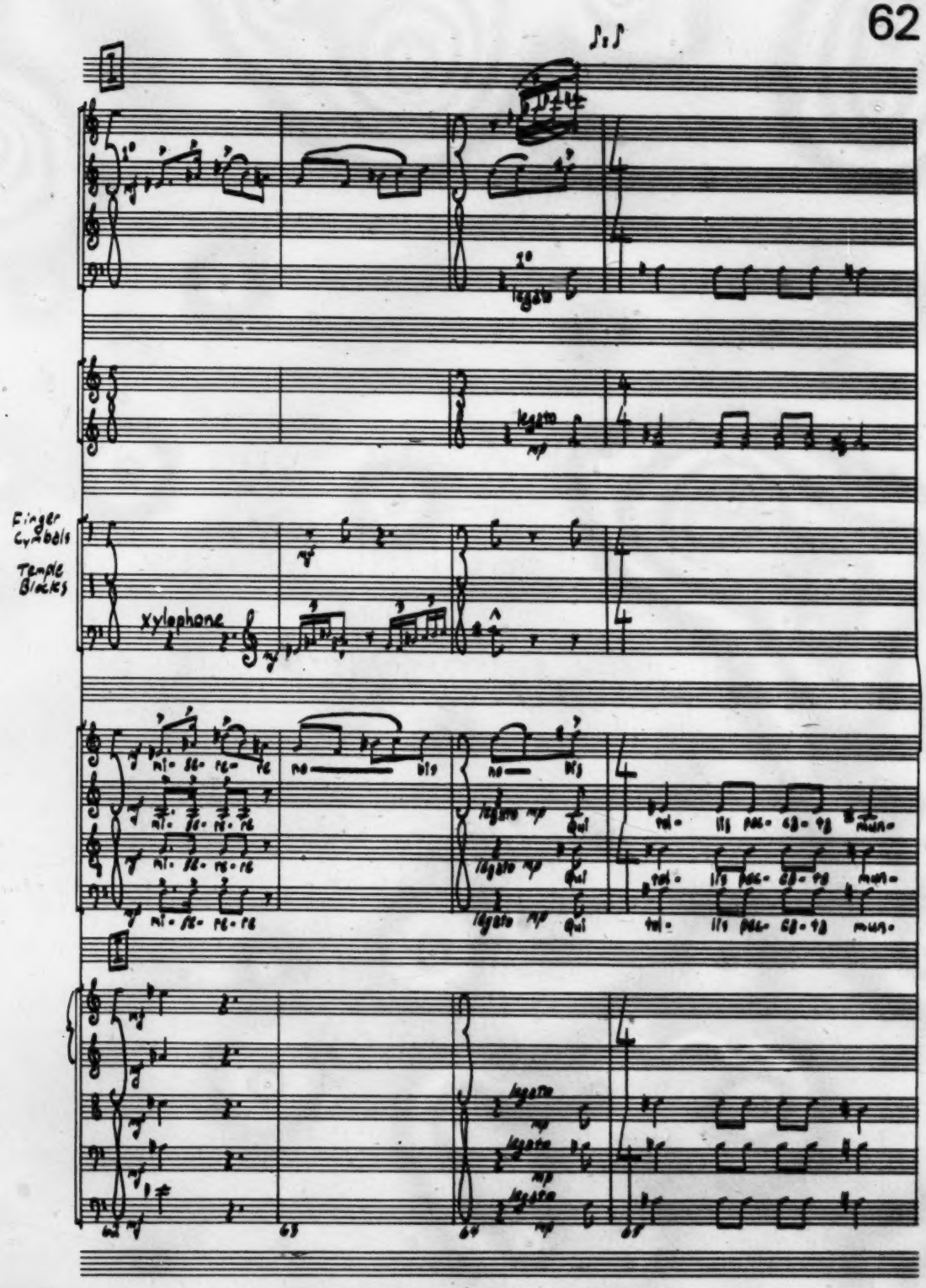
a tempo ♩.=84
♩=♩
Finger Cymbals
Temple Blocks
Marimba
mf
Rex
coe- le-
tris
De- us Pa- ter
a tempo ♩.= ff

cres.
Finger Cymbals
Temple Blocks
Marimba
molto portando

Meno Mosso ♩ = 104

Tempo giusto ♩ = 124

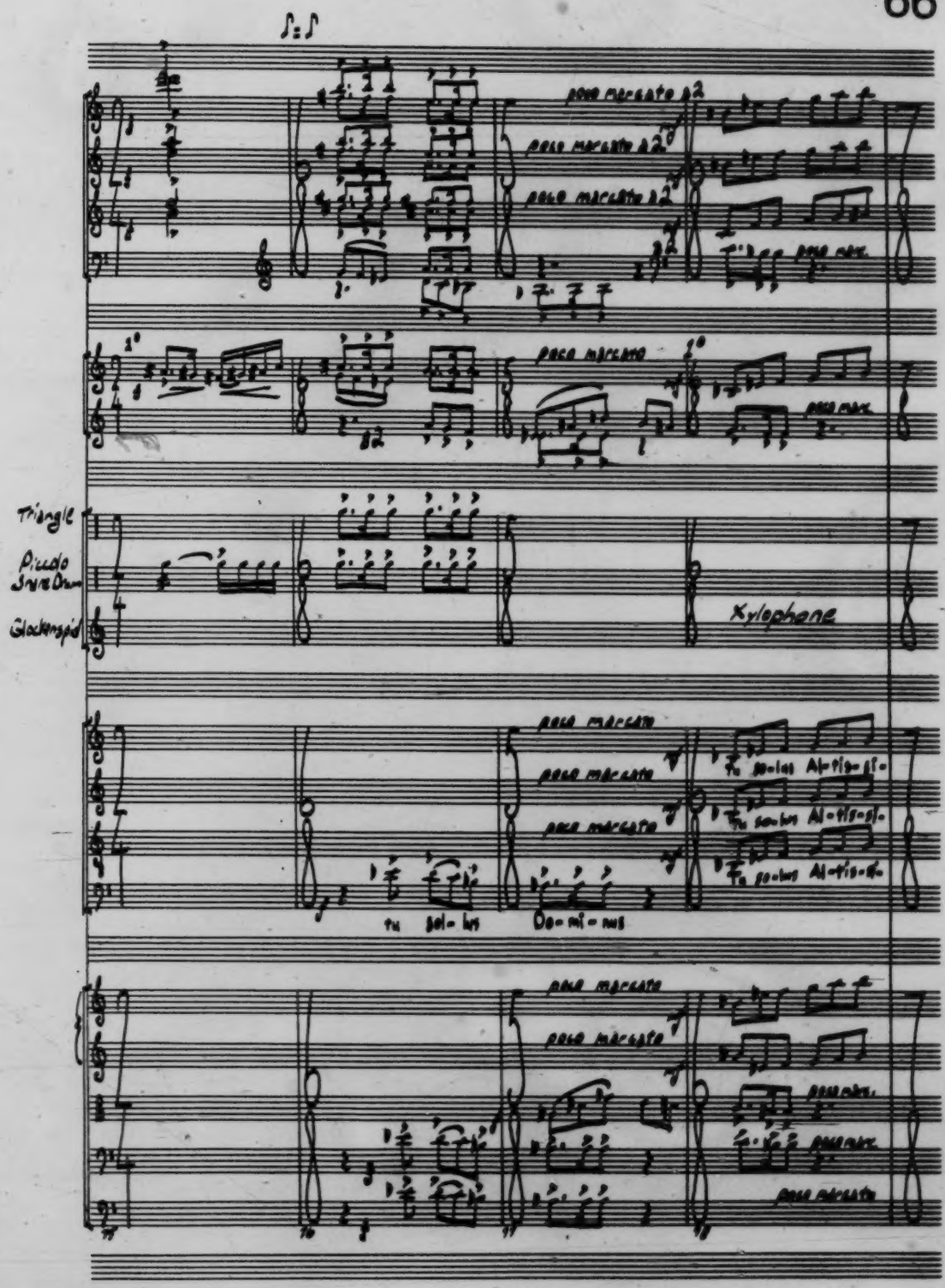
legato
Finger Cymbals
Temple Blocks
Marimba
legato
De- ni- ne De- us
A- gnus De- i
Fi- li- us Pa- tris, Qui
tol- lis pec- ca- ta mun- di
legato
De- ni- ne De- us
A- gnus De- i
Fi- li- us Pa- tris, Qui
tol- lis pec- ca- ta mun- di
legato
De- ni- ne De- us
A- gnus De- i
Fi- li- us Pa- tris, Qui
tol- lis pec- ca- ta mun- di
legato
59
60
61

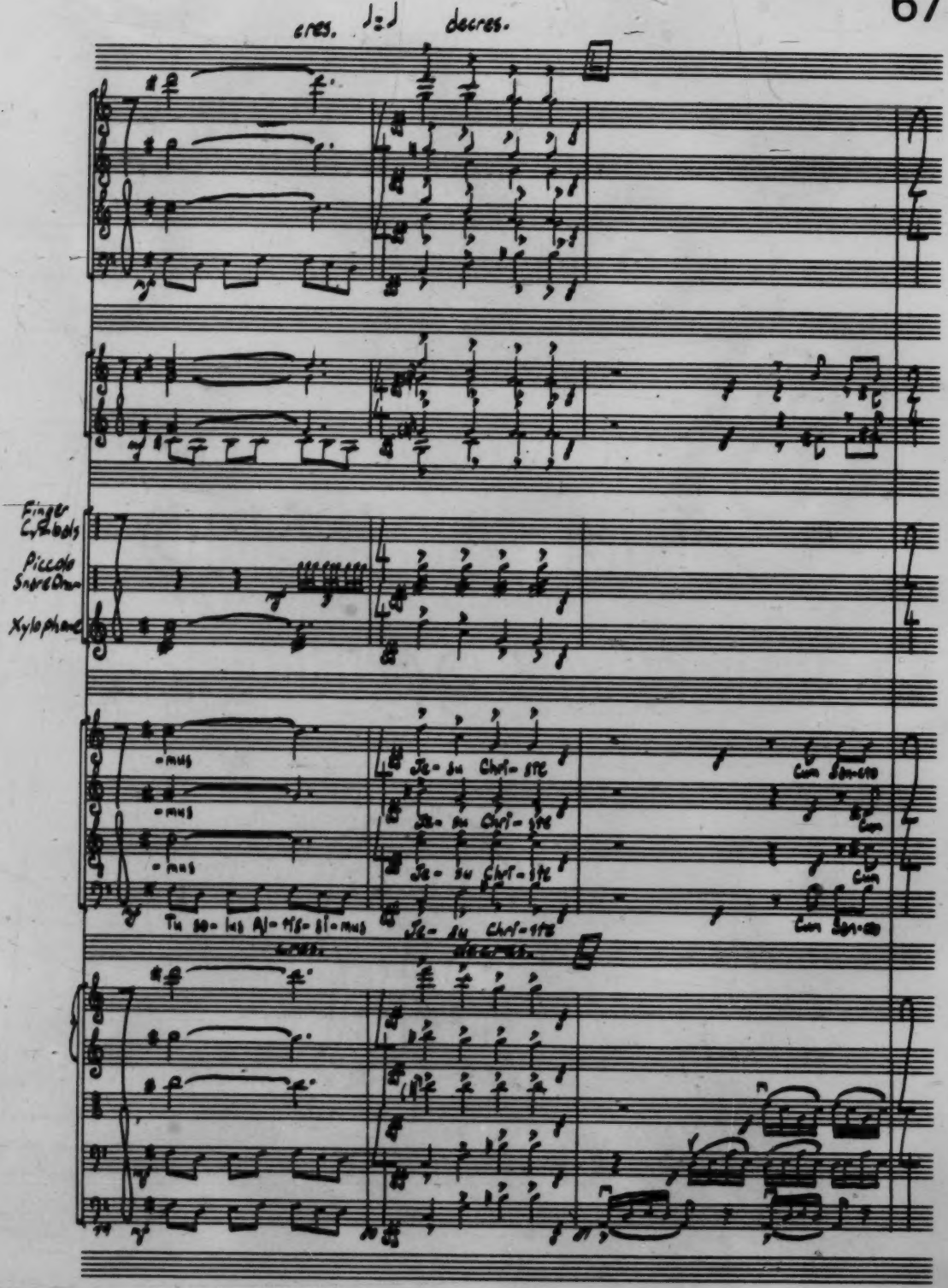

Finger Cymbals
Temple Blocks
xylophone
legato
mp
mf
63
64
65

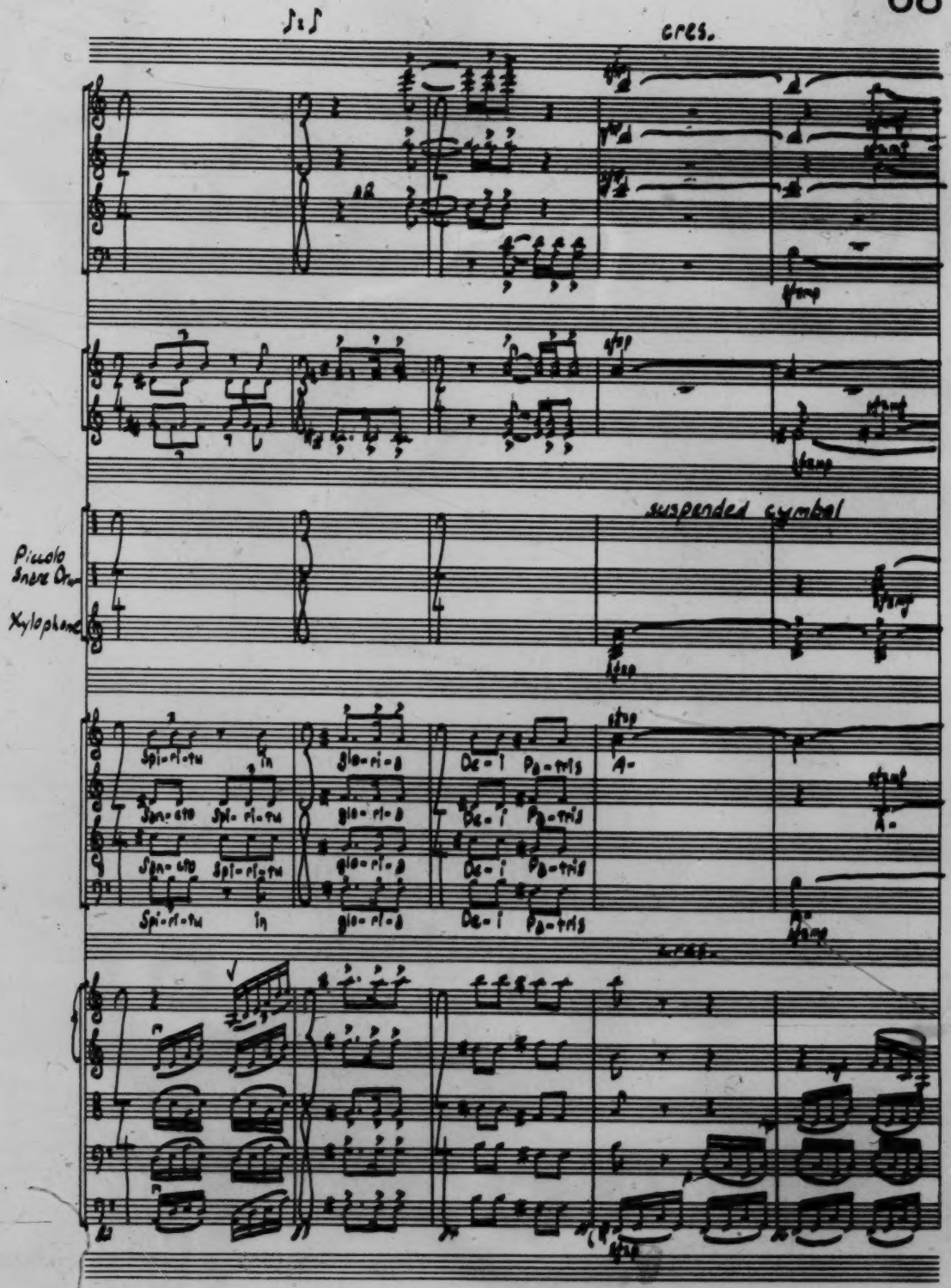
rit.
Meno mosso ♩= 104
Triangle
Temple Blocks
Xylophone
Glockenspiel
Tri- an- gle
Glo- cken- spiel
O- nen no-
stram
Qd
rit.
Meno mosso ♩= 104
tr
mp
mf
66
67
68

Hold rit.

a tempo ♩= 120
cres.
K
Triangle
Piccolo
Snare Drum
Glockenspiel
-bis
Qui-ni-am tu so- lus sanctus
a tempo ♩= 120
cres.
K


poco marcato
poco marcato
poco marcato
poco marc.
poco marcato
poco marc.
Triangle
Piccolo
Snare Drum
Glockenspiel
Xylophone
poco marcato
poco marcato
poco marcato
tu sol- lus
Do- mi- nus
poco marcato
poco marcato
poco marc.
poco marc.
poco marcato

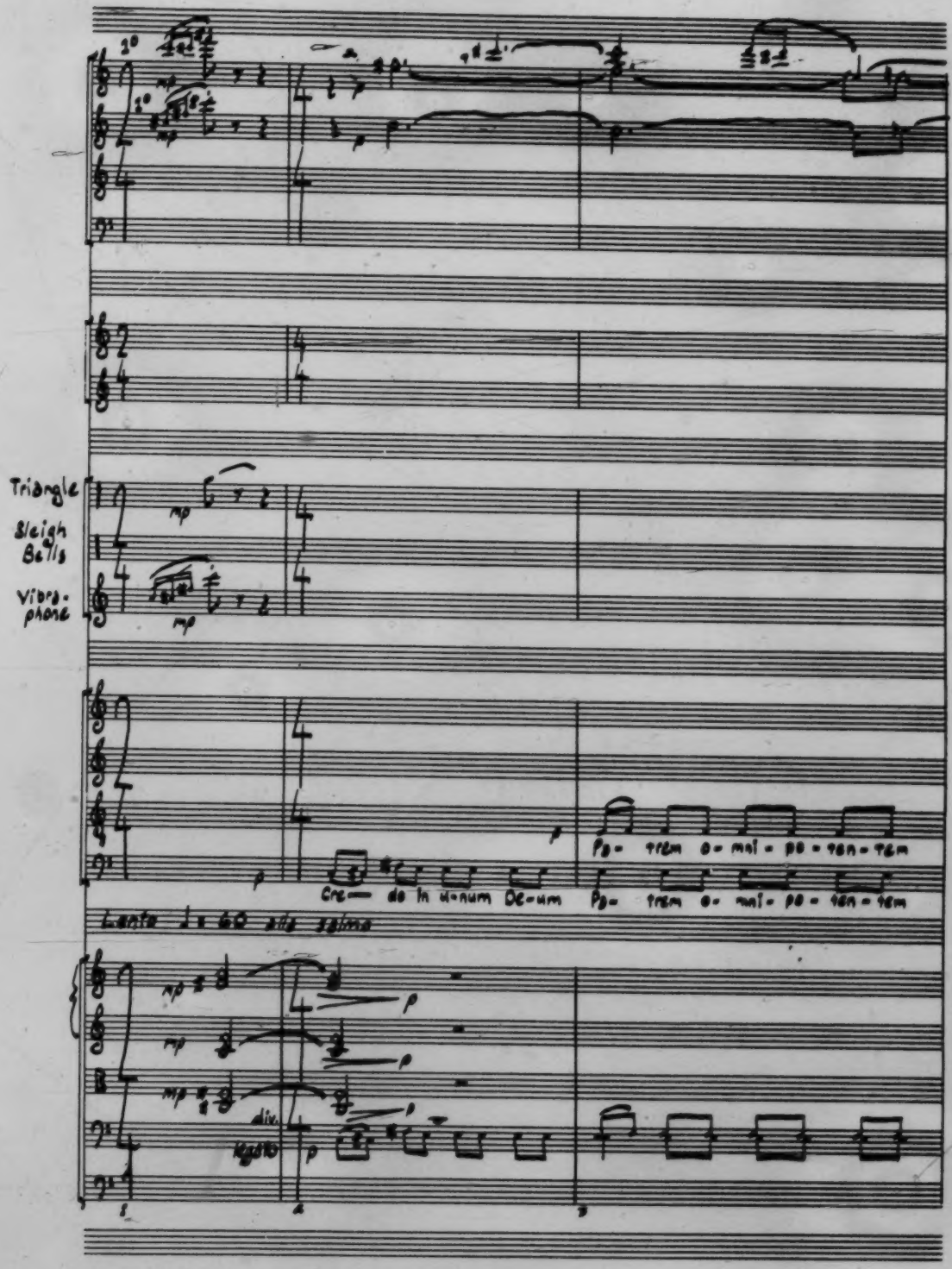

cres. decres.
Finger Cymbals
Piccolo Snare Drum
Xylophone
-mus
Je- su Chri- ste
Cum Sanc-to
Tu so- lus Al- tis- si- mus
cres. decres.


cres.
suspended cymbal
Piccolo
Snare Drum
Xylophone
Spi-ri-tu
in
glo-ri-a
De-i
Pa-tris
cres.

cres.
Suspended Cymbal
Piccolo Snare Drum
Xylophone
cresc.

Lento ♩= 60 alla salmo

Credo

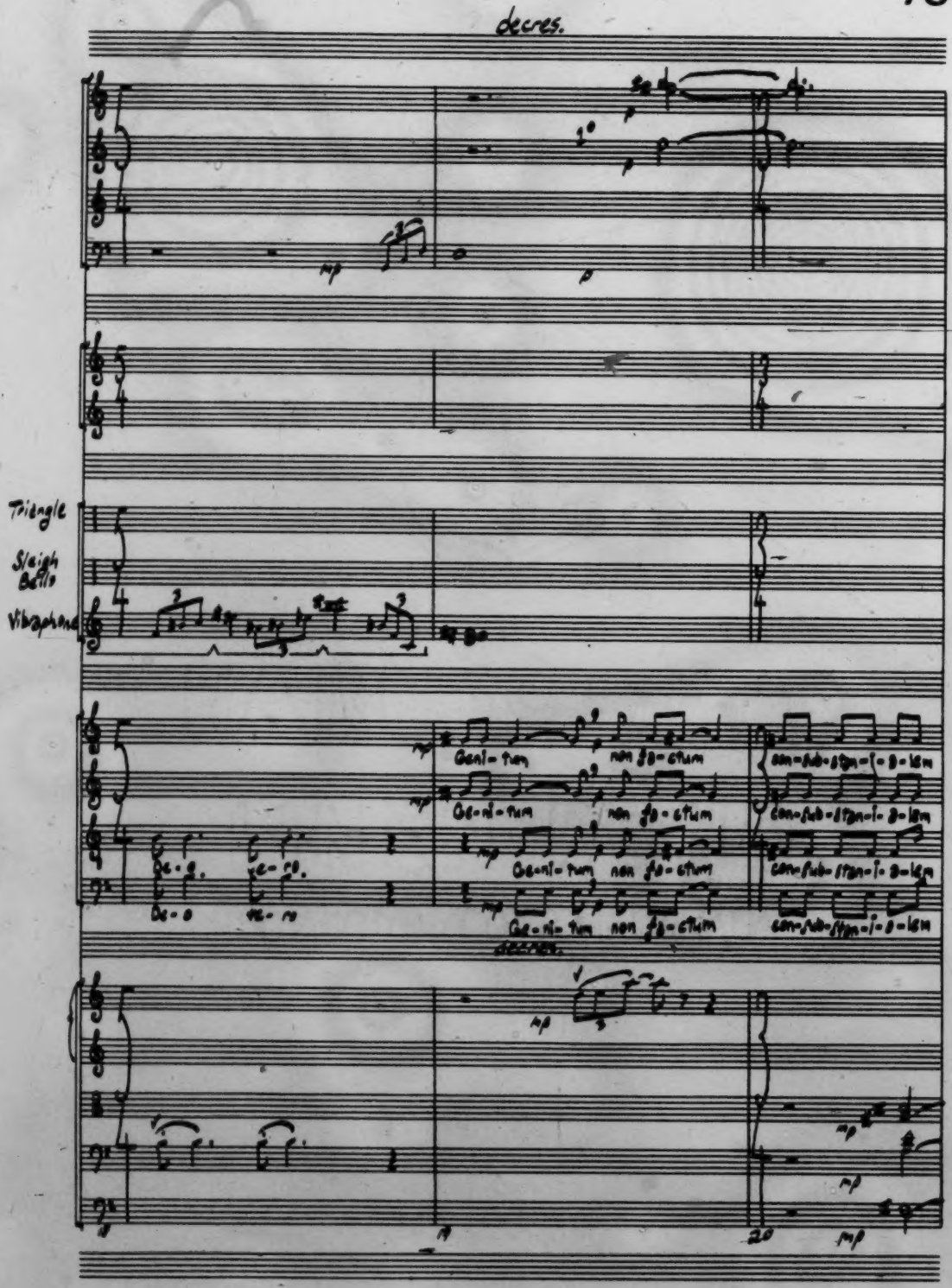


rit.
Triangle
Sleigh Bells
Vibraphone
vi-si-bi-li-um o-mni-um
et in-vi-si-bi-li-
um
Ja- cto-rum coe-li et ter-
rae
Solo
Tutti
rit.

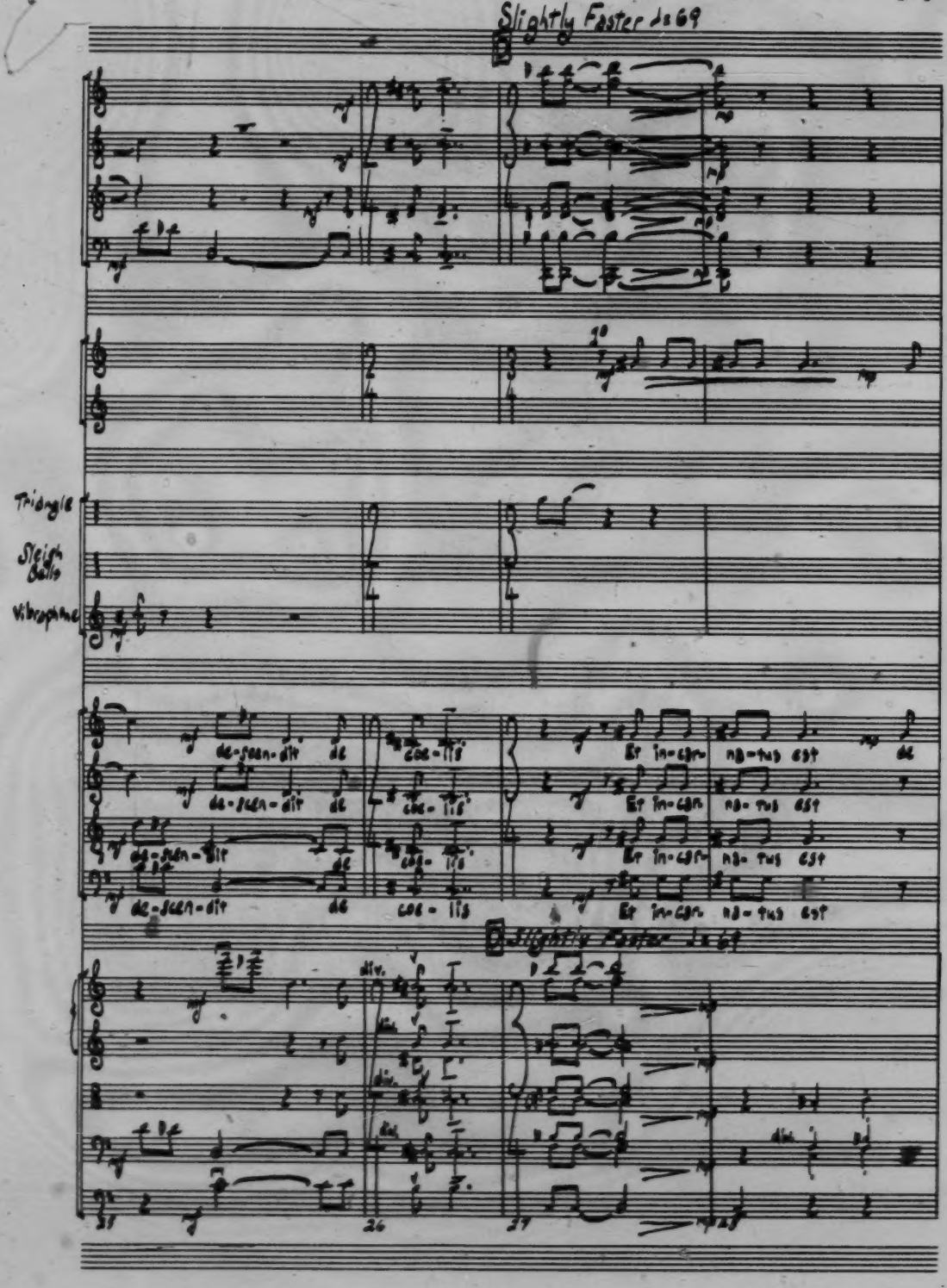
a tempo
cres.
cres.
Triangle
Sleigh Bells
Vibraphone
Et in unum Do-mi-num
Je-sum Chri-stum
Je-sum Chri-stum
Fi-li-um De-i
u-ni-ge-ni-tum
u-ni-ge-ni-tum
a tempo
cres.
cres.

Triangle
Sleigh Bells
Vibraphone
Ped.
free time
legato
Et ex Pa-tre na-tum
Ge-um de Ge-o

poco rit.
a tempo
Triangle
Sleigh Bells
Vibraphone
mp
lu-men de lu-mi-ne
lu-men de lu-mi-ne
De-um ve-rum de
cresc.
poco rit.
a tempo

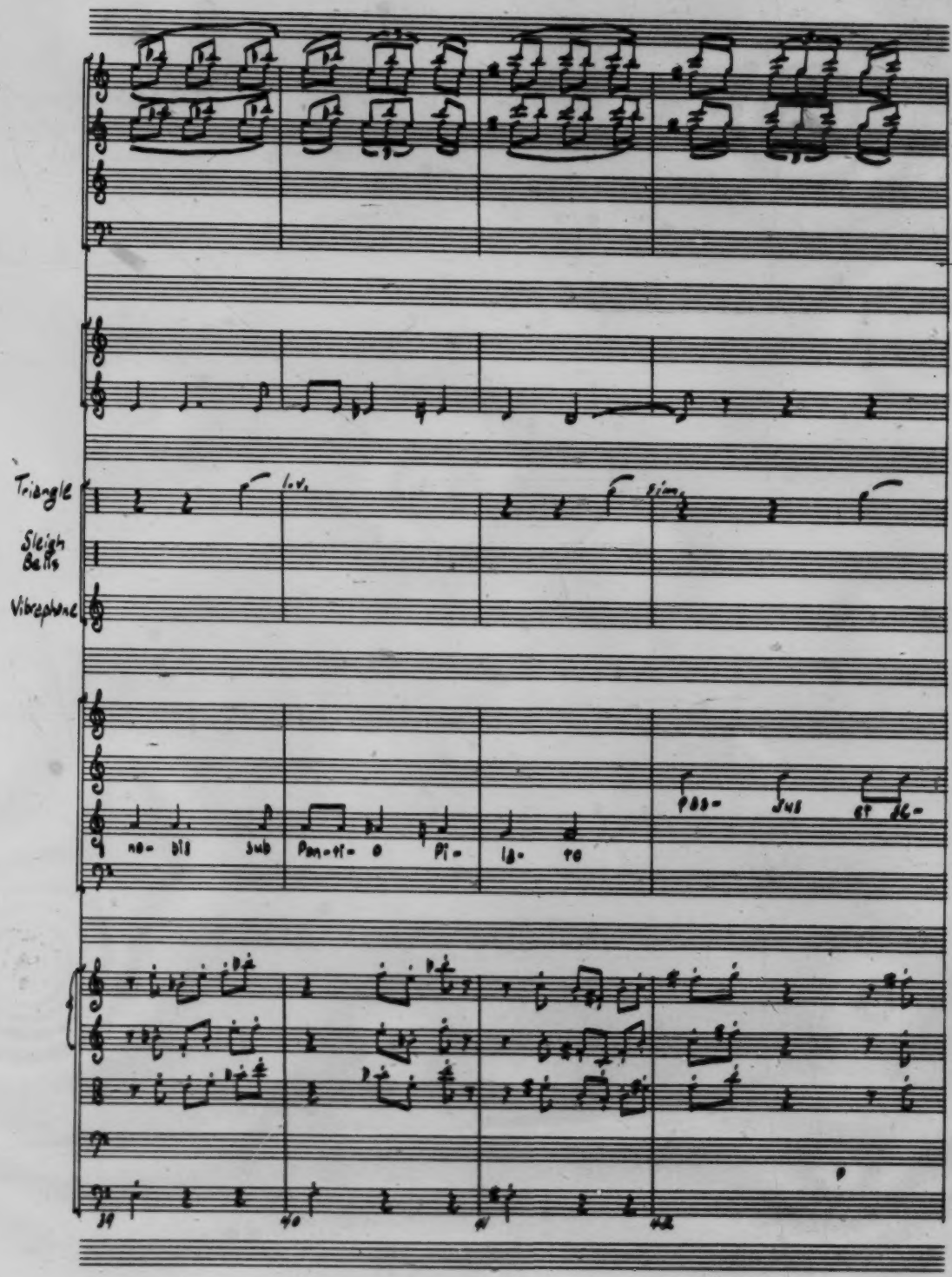

decres.
Triangle
Sleigh Bells
Vibraphone
Ge-ni-tum
non ge-ni-tum
con-sub-stan-ti-a-lem
Ge-ni-
tum
non ge-
ni-tum
con-sub-
stan-ti-
a-lem
decres.
mp
10
20

poco più mosso ♩=66
Triangle
Sleigh Bells
Vibraphone
Qui pro- pter nos ho-mi-nes et
pro- pter no-stram sa-lu-tem
per quem o-mni-a fa-cta sunt
poco più mosso ♩=66

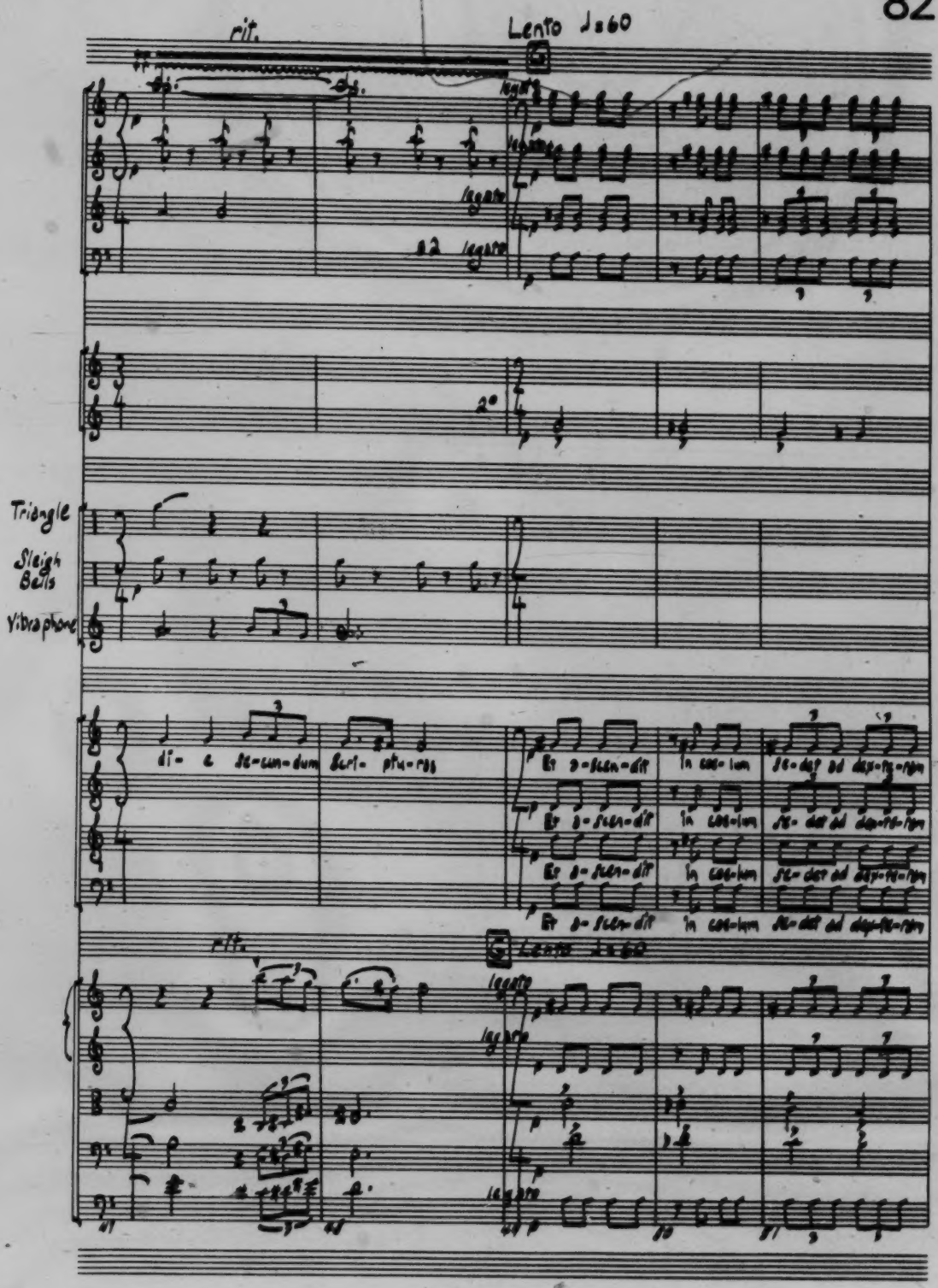

Slightly Faster ♩= 69
Triangle
Sleigh Bells
Vibraphone
de-scen-dit
coe-lis
Et in-ter-ra pa-tus est
Slightly Faster ♩= 69
div.
31
26
27

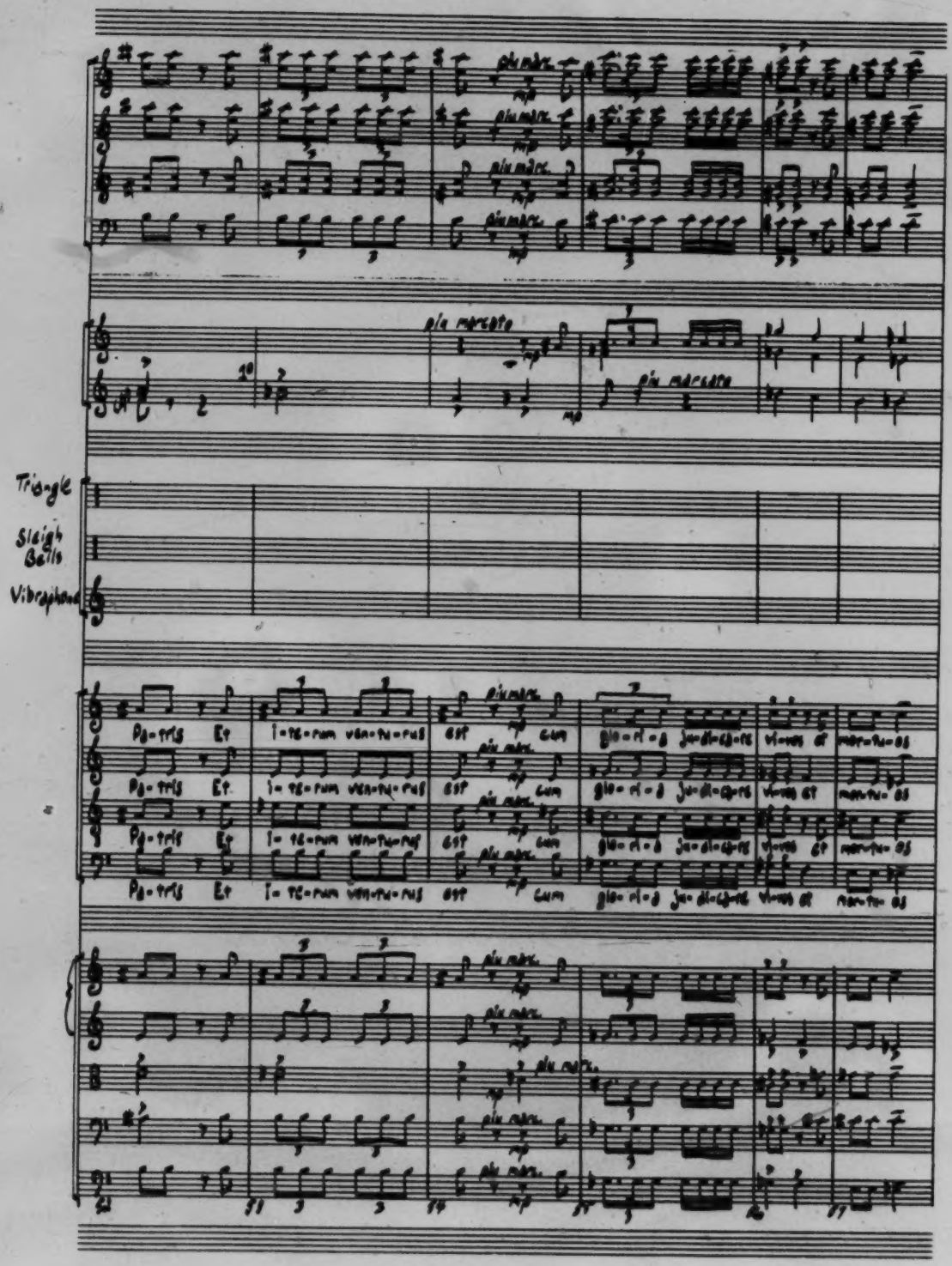
poco accel. poco rit. e dim. a tempo

cres.
decres.
Con moto ♩=72
legato
Triangle
Sleigh Bells
Vibraphone
Cru- ci- fix- us
p e- ti- am pro
cres.
decres.
Con moto ♩=72
pizz.
35
36
37
38


Triangle
l.v.
sim.
Sleigh Bells
Vibraphone
no- bil sub
Pan-ti- o
Pi-
lo- to
Pas- sul
et de-
39
40
41
42

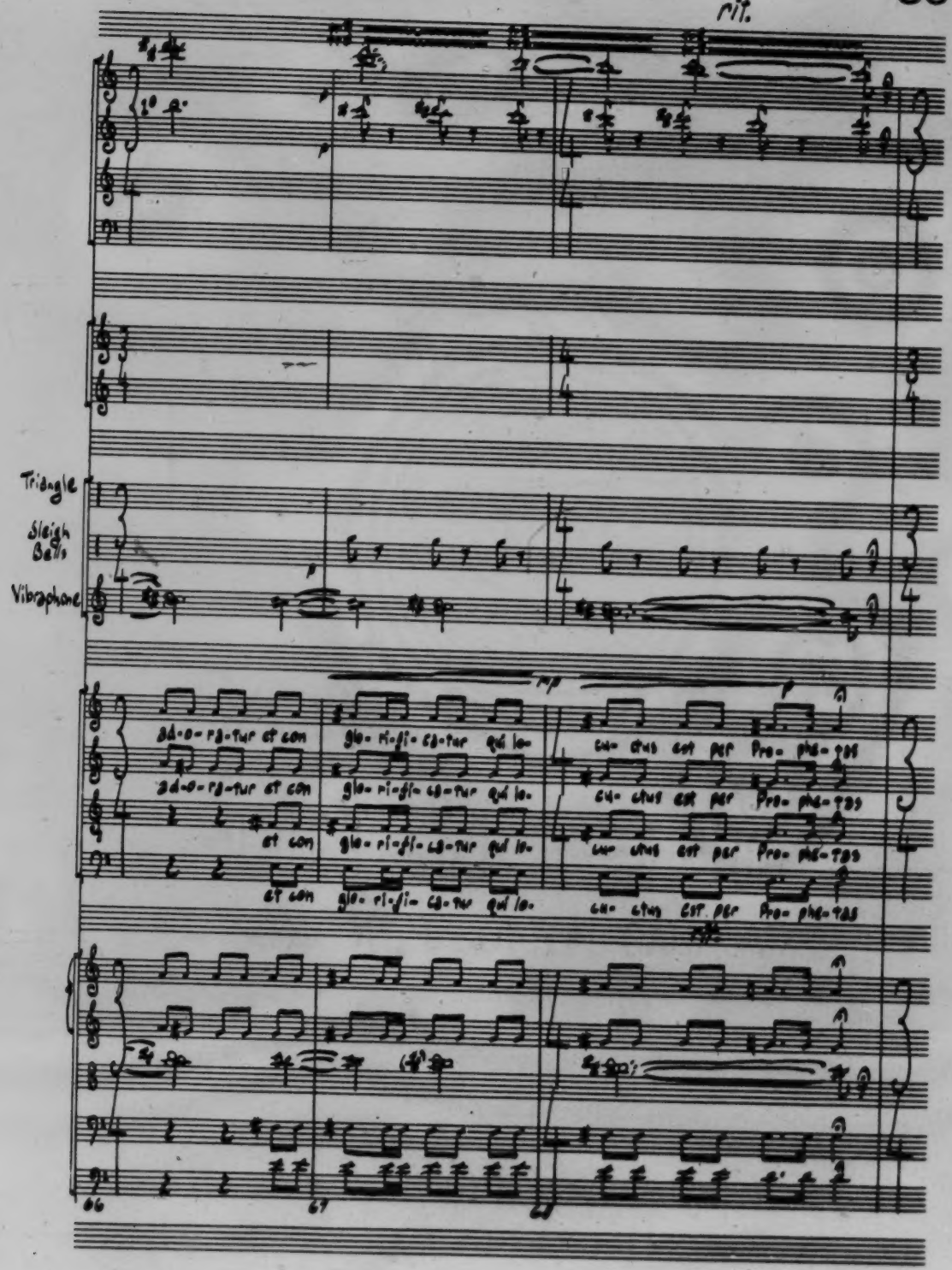
Triangle
Sleigh Bells
Vibraphone
2°
pul- tub est
re-
dec- re- sit
ter - ri - ble
DECO


rit.
Lento ♩=60
Triangle
Sleigh Bells
Vibraphone
di- c se-cun-dum scri- ptu-ras
Et a-scen-dit in coe-lum se-det ad dex-te-ram
legato
2°


Triangle
Sleigh Bells
Vibraphone
più mosso
più marcato
Pa-tris Et
I-te-rum ven-tu-rus
est
cum
glo-ri-a
ju-di-ca-re
vi-vos
et
mor-tu-os

Triangle
Sleigh Bells
Vibraphone
cu-jus re-gni non e-rit fi-nis
Et in Spi-ri-tum San-ctum Do-mi-num Et

Triangle
Sleigh Bells
Vibraphone
mp
Qui tum Pa-tris et Fi-li-o si-mul-
Qui tum Pa-tris et Fi-li-o si-mul-
vi- vi-o-li-cha-tem qui ex Pa-tre Fi-li-o-que pro-ce-
vi- vi-o-li-cha-tem qui ex Pa-tre Fi-li-o-que pro-ce-
dit
dit
div.
div.


rit.
Triangle
Sleigh Bells
Vibraphone
mp
Ad-o-ra-tur et con
glo-ri-fi-ca-tur qui lo-
cu-tus est per Pro-phe-tas
Ad-o-ra-tur et con
glo-ri-fi-ca-tur qui lo-
cu-tus est per Pro-phe-tas
et con
glo-ri-fi-ca-tur qui lo-
cu-tus est per Pro-phe-tas
et con
glo-ri-fi-ca-tur qui lo-
cu-tus est per Pro-phe-tas
66
67

a tempo
Triangle
Sleigh Bells
Vibraphone
a tempo

Triangle
Sleigh Bells
Vibraphone
Con-fi-te-or u-num
Con-fi-te-or u-num
in re-mi-si-o-nem
in re-mi-si-o-nem
legato
legato

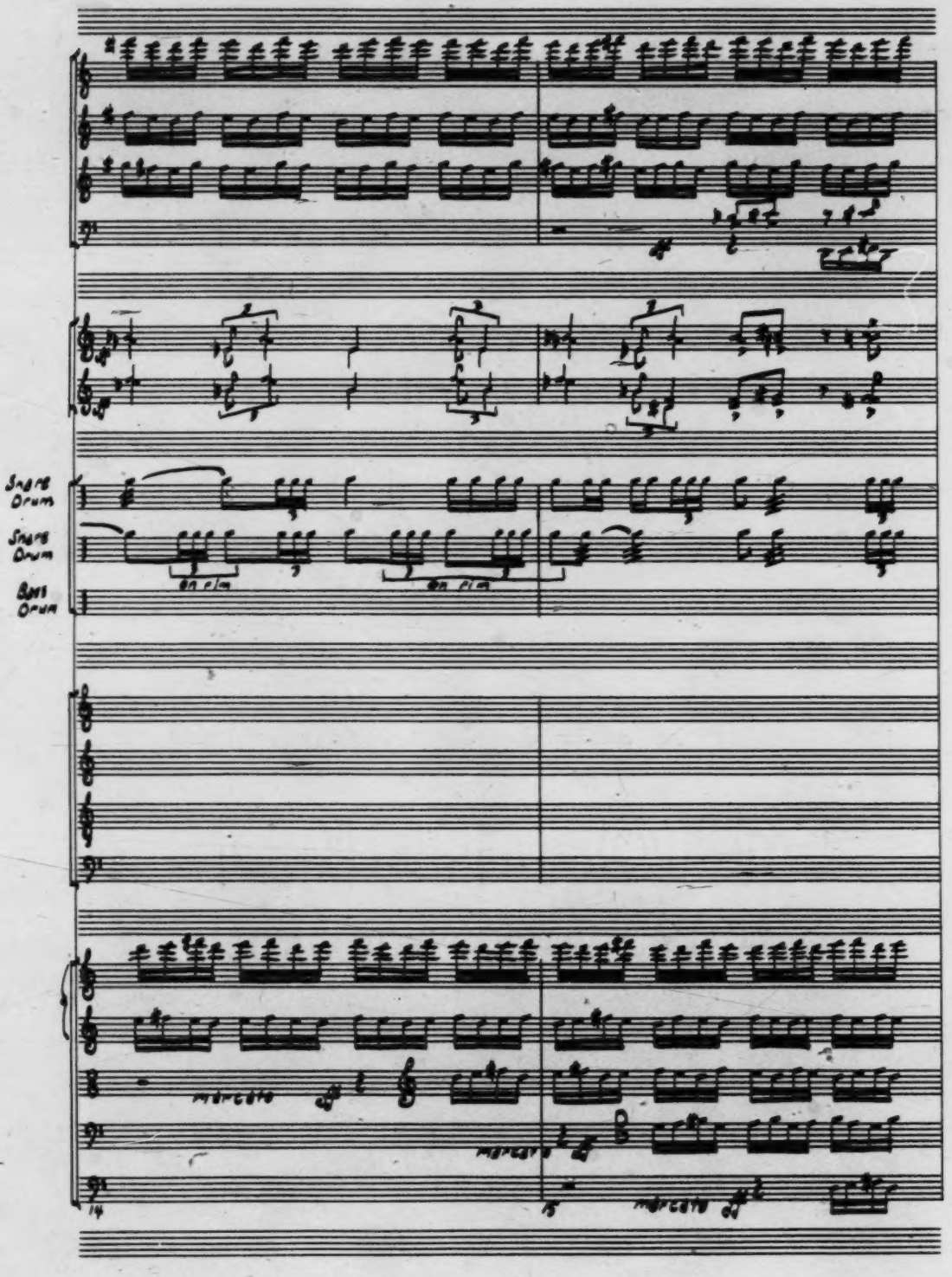
Triangle
Sleigh Bells
Vibraphone
legato
Et ex-spe-cto re-sur-re-cti-
o-rem mor-tu-os rum
Et vi-tam ven-tu-ri sae-cu-li

poco rit. decres.
Triangle
Sleigh Bells
Vibraphone
mfp
poco rit. decres.

Pesante ♩= 88
Vivace con fuoco ♩= 116
A
8va
a2 marcato
a2 marcato
a2 marcato
marcato
marcato
a2
Snare Drum
Snare Drum
Bass Drum
Pesante ♩= 88
A Vivace con fuoco ♩= 116
marc.
marc.
marc.
marc.

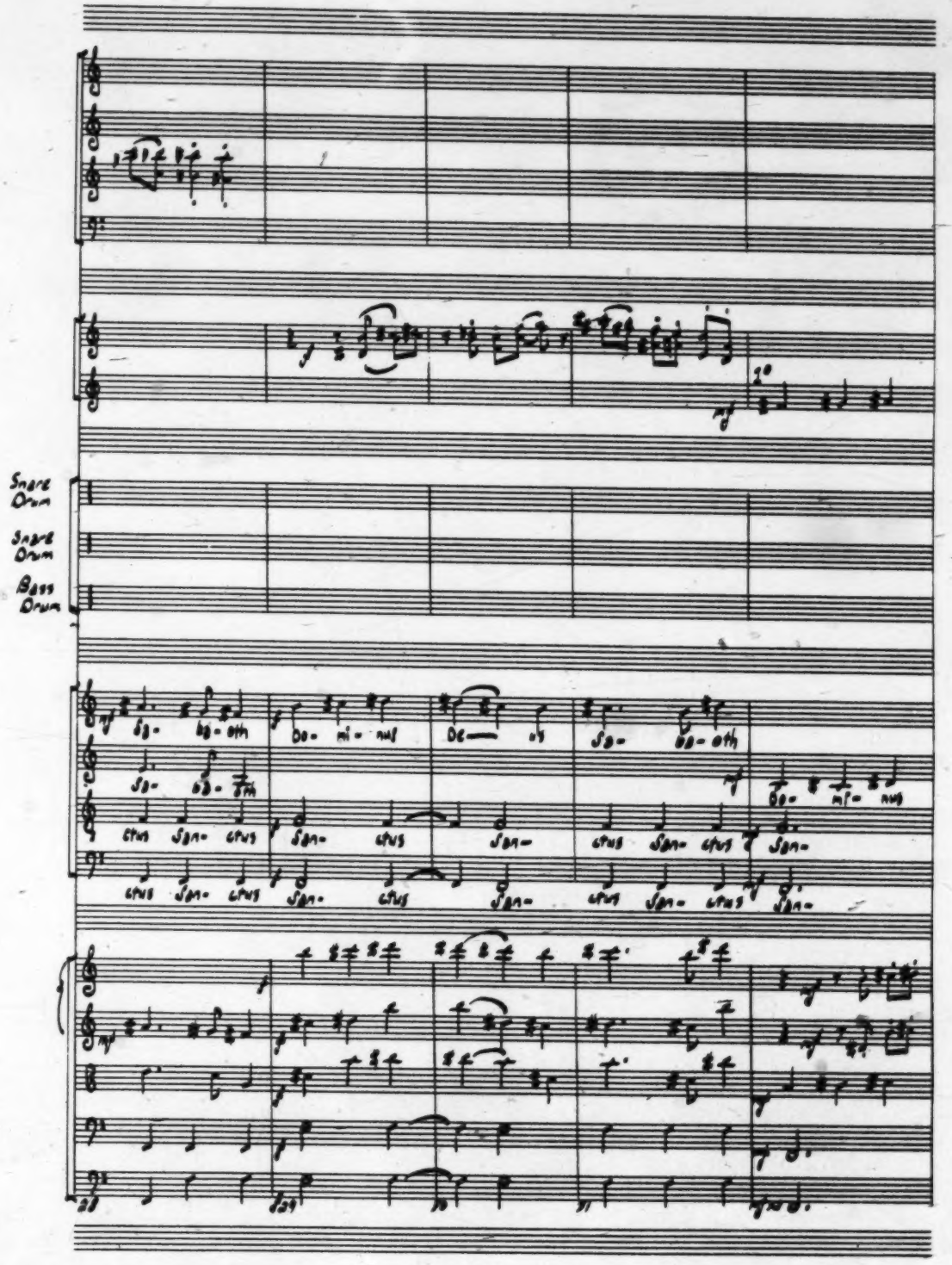
Meno mosso ♩=11 molto accel. e cresc.
♪=♪
♩=120
molto rit.
Snare Drum
Tenor Drum
Bass Drum
Meno mosso ♩=11 molto accel. e cresc.
♩=120
molto rit.

Vivace
marcato
Snare Drum
Bass Drum
Vivace
marcato
11
12
13

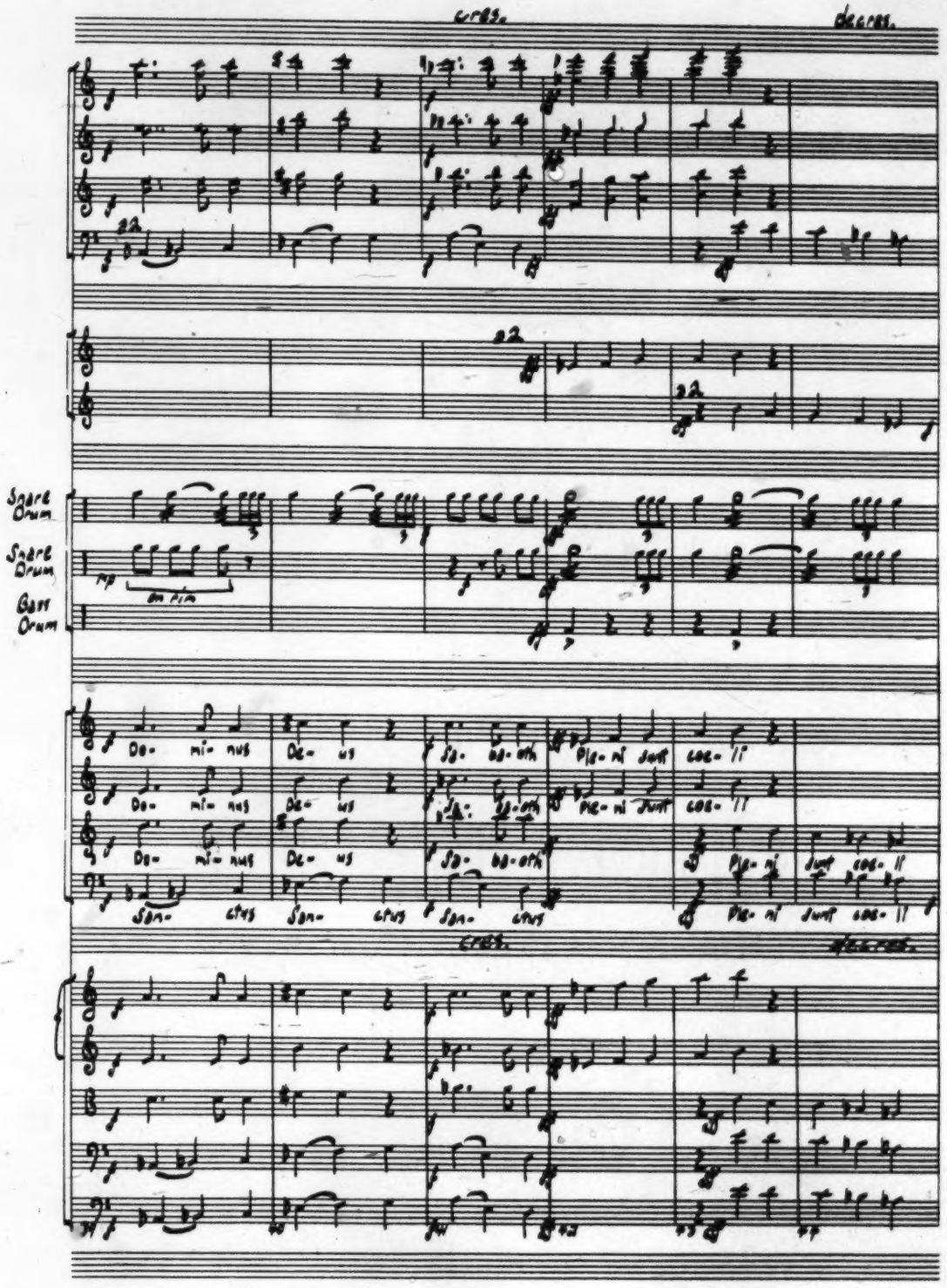

Snare Drum
Snare Drum
Bass Drum
on rim
on rim
marcato
marcato
marcato

dim.
confuoco ♩= 160
Snare Drum
Snare Drum
Bass Drum
San-ctus
San-ctus
San-ctus
Do-mi-nus
De-us
dim.
confuoco ♩= 160
16
17
18
19
20
21

Snare Drum
Snare Drum
Bass Drum
Sa- ba- oth
San- ctus
Do- mi- nus
De— us
33


Snare Drum
Snare Drum
Bass Drum

Snare Drum
Snare Drum
Bass Drum
sub.f
cresc. poco a poco
Sax. ophs
Sax. ophs


Snare Drum
Snare Drum
Bass Drum
Do- mi- nus
De- us
Sa- ba- oth
Ple- ni sunt coe- li
San- ctus

Snare Drum
Snare Drum
Bass Drum
ple- ni sunt coe- li
ple- ni sunt coe- li et
46
47
48
49

♩. = 116
Snare Drum
Snare Drum
Bass Drum
glo- ri- a
tu- a
Ho— san- na in— ex- cel- sis
♩. = 116

rit.
molto rit.
Snare Drum
Snare Drum
Bass Drum
Triangle
Finger Cymbals
rit.
molto rit.

Pesante
molto allarg.
Moderato Jazz 'Benedictus'
Triangle
Finger Cymbals
Ho
San
Pesante
molto allarg.
Moderato Jazz 'Benedictus'
Solo

Triangle
Finger Cymbals
qui
ve-
nit
Tutti

Meno mosso ♩.=66
Triangle
Finger Cymbals
in
no- mi- ne
Do- mi- ni
Ho-
san- na
Meno mosso ♩.=66
div.
mp

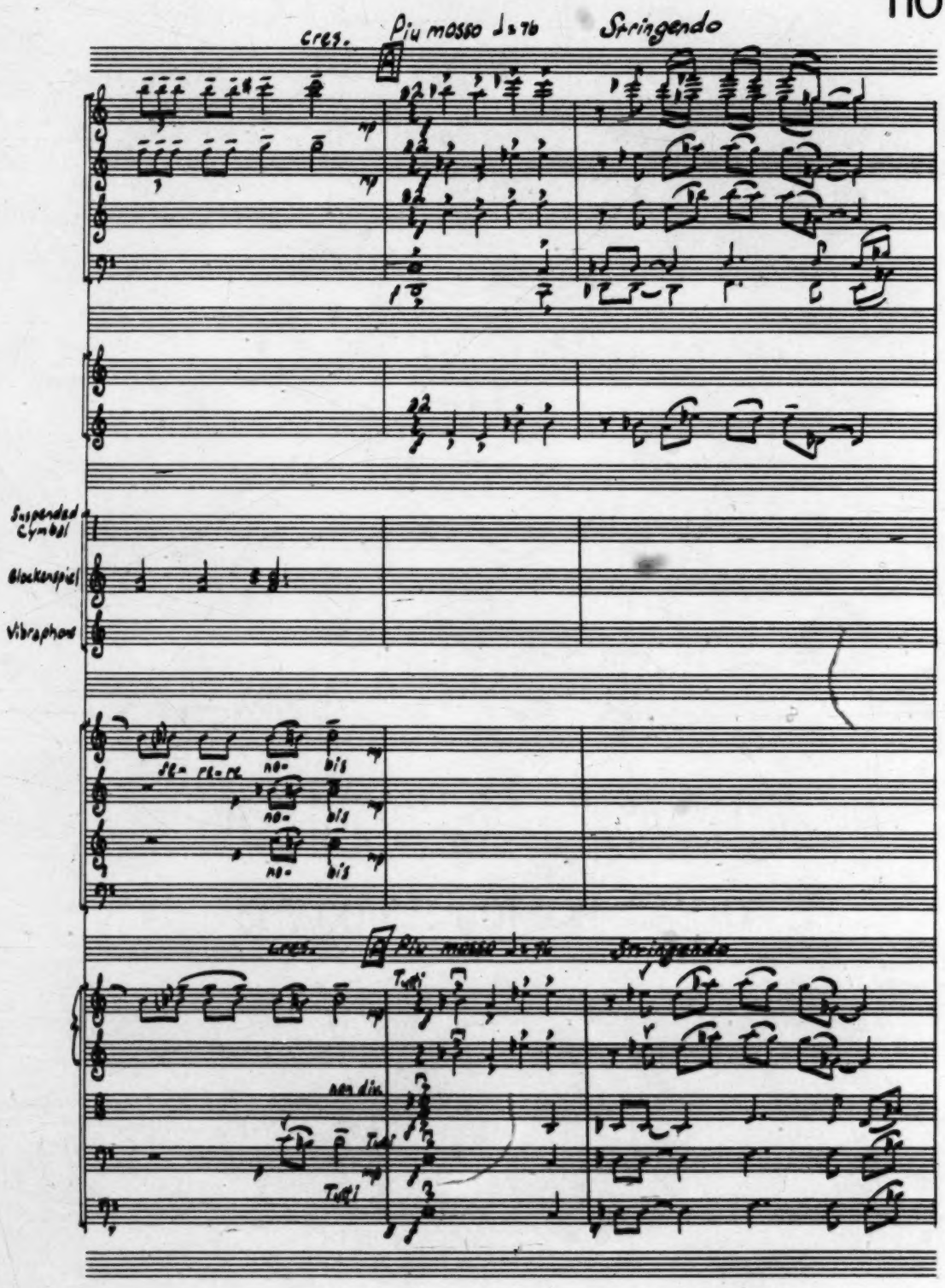
cres.
Subito vivo
Triangle
Finger Cymbals
cres.

Triangle
Finger Cymbals

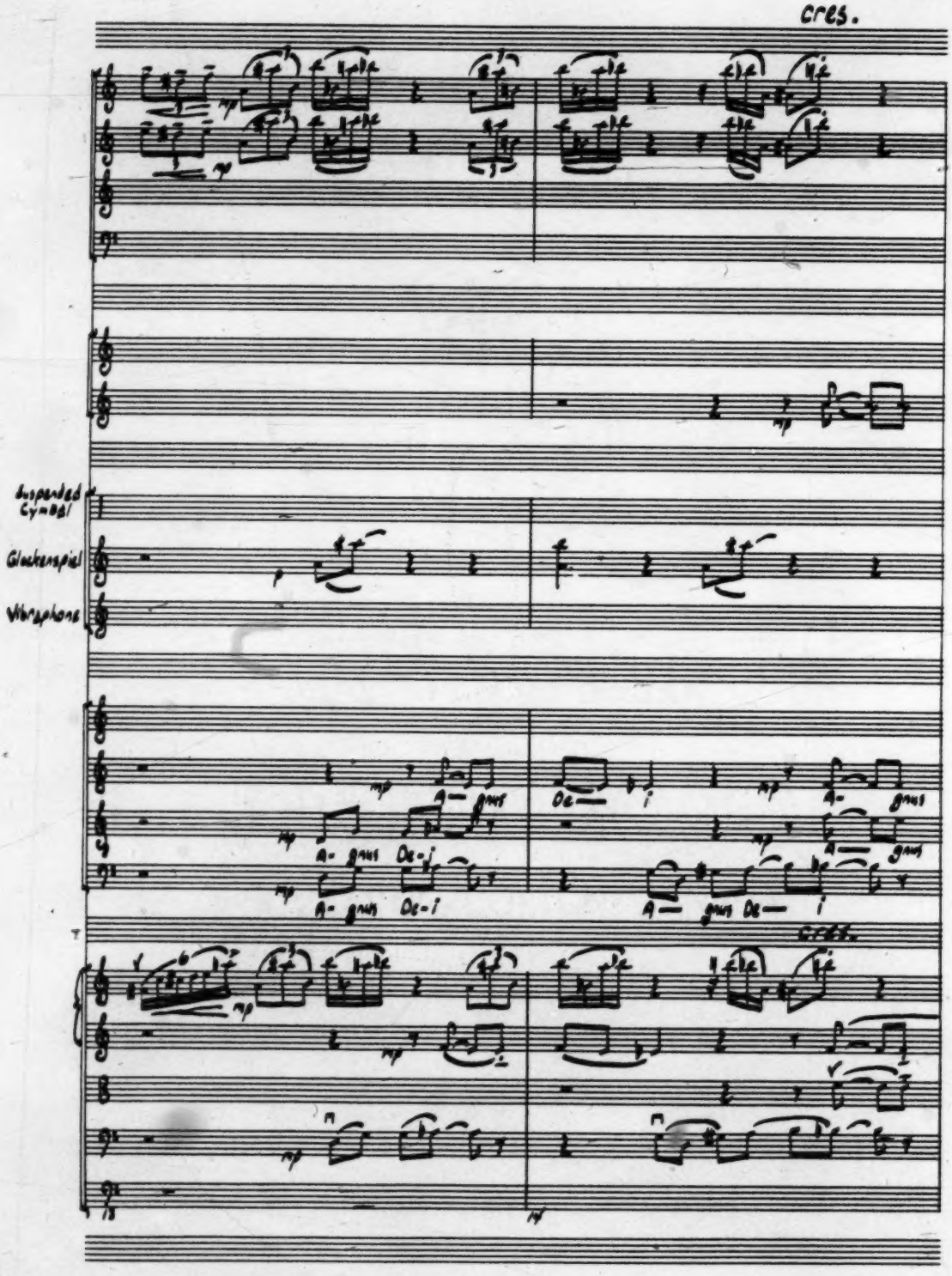
Agnus Dei

♩ = 48 Appassionato
Suspended Cymbal
Glockenspiel
Vibraphone
Solo
A- gnus De- i
qui tol- lis
pec-ca-ta mun-di
♩ = 48 Appassionato
Solo
Solo
Solo

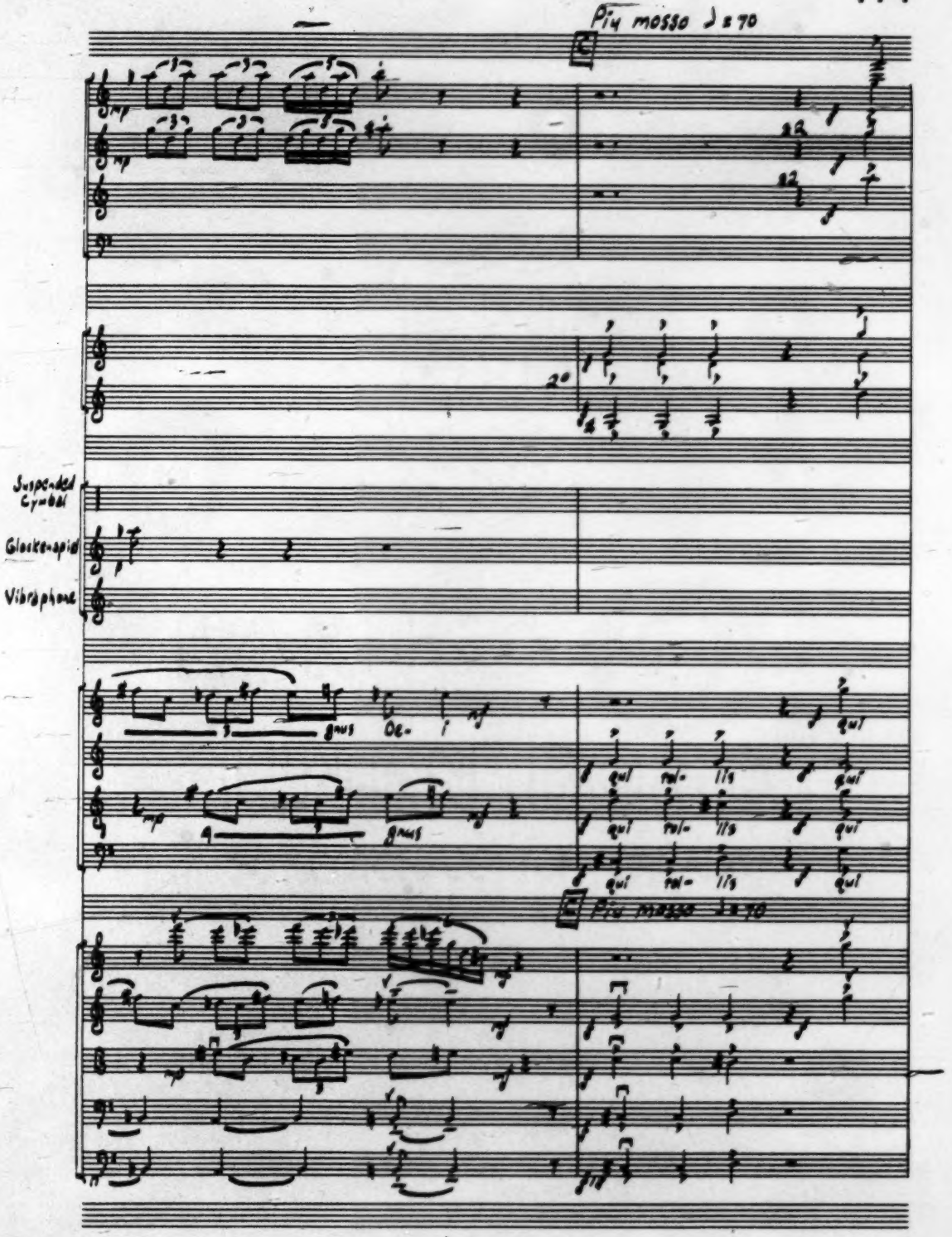
Suspended Cymbal
Glockenspiel
Vibraphone
Glockenspiel
Vibraphone
Tutti
Solo
Sul d
portando
Solo
Solo

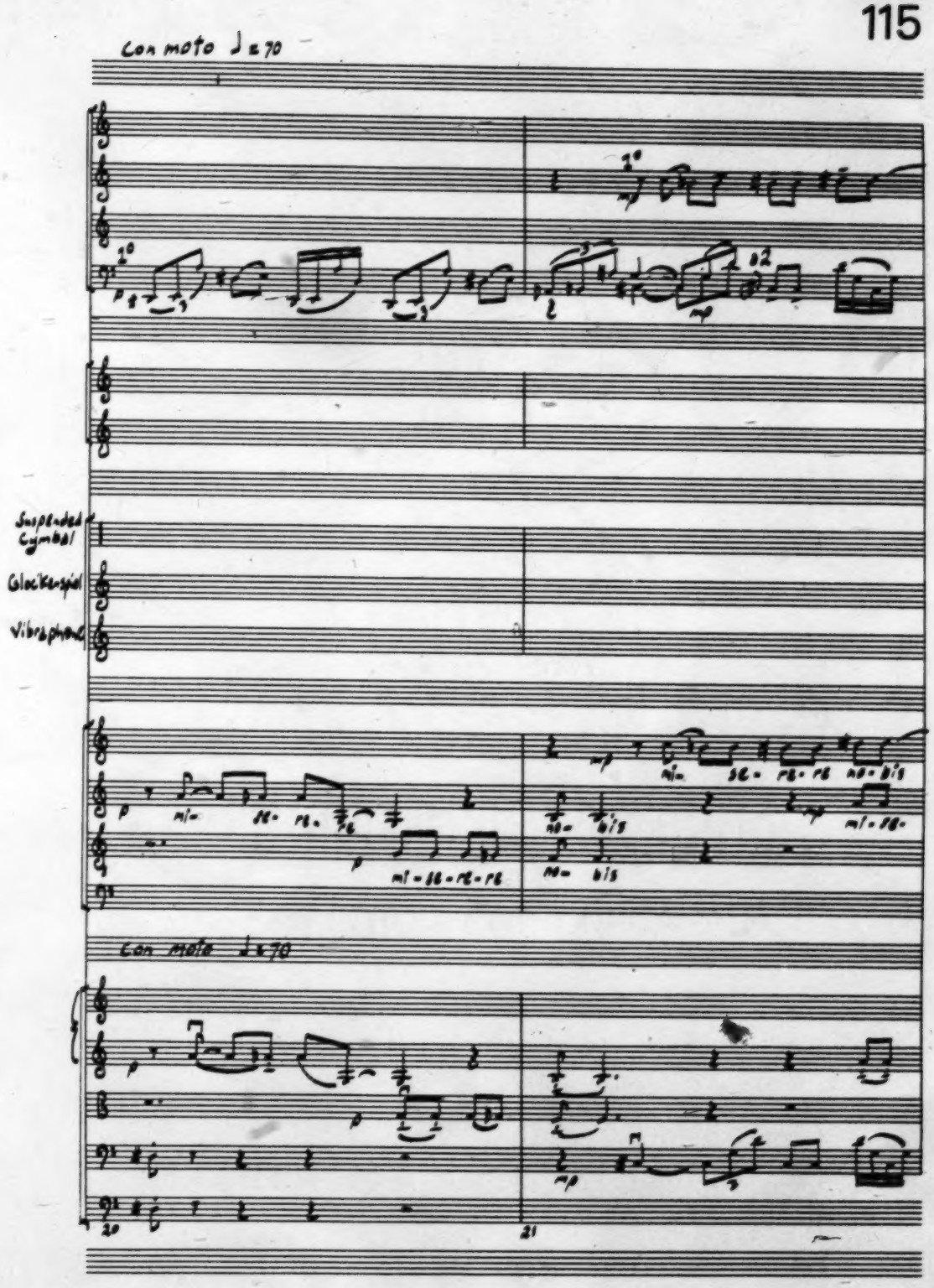

cresc.
Più mosso ♩= 76
Stringendo
Suspended Cymbal
Glockenspiel
Vibraphone
cresc.
Più mosso ♩= 76
Stringendo
Tutti
Tutti
Tutti

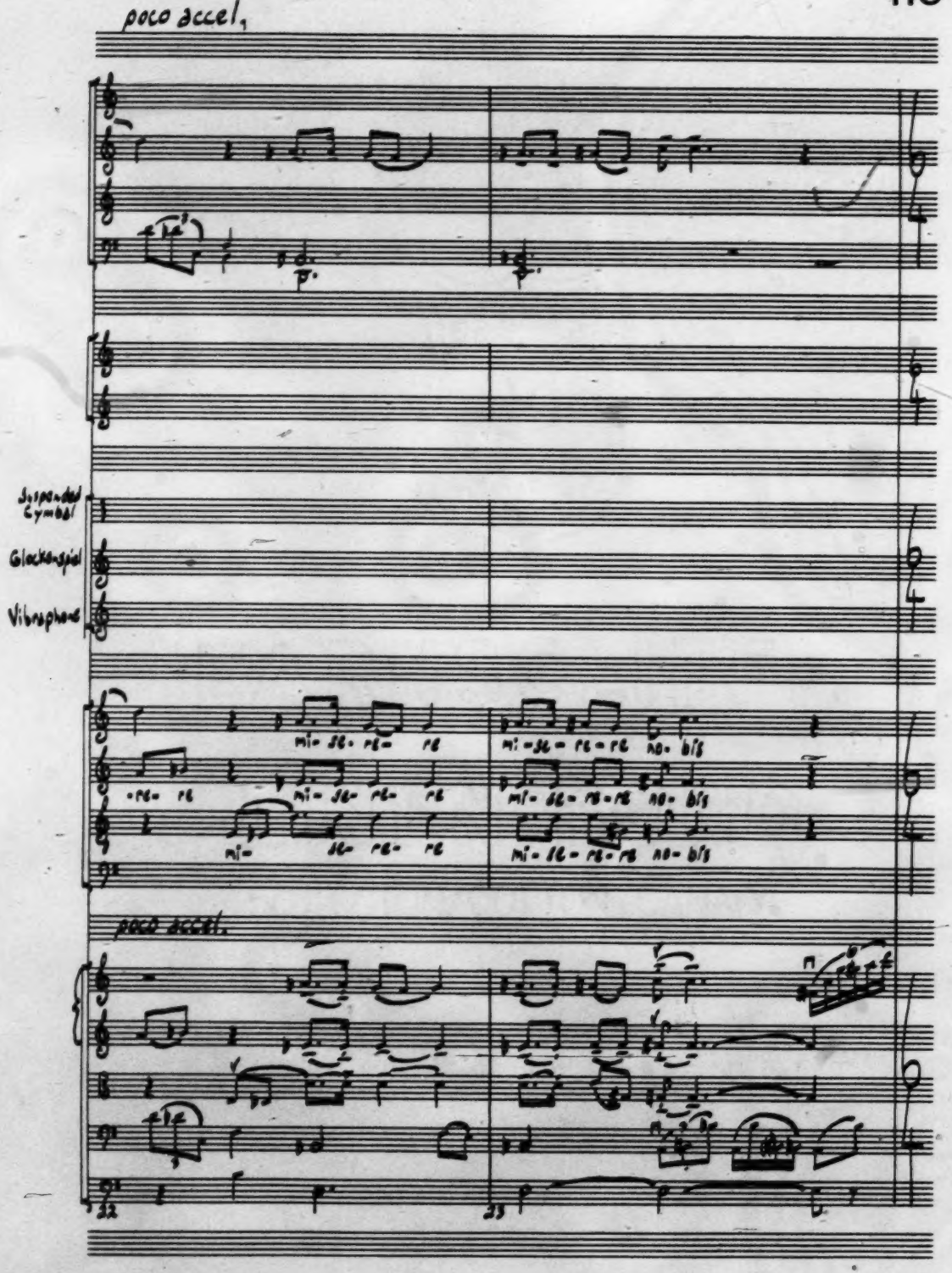
rit. e dim.
Meno mosso ♩ = 66
Suspended Cymbal
Glockenspiel
Vibraphone
A - gnus De - i
rit. e dim.
Meno mosso ♩ = 66


cres.
Suspended Cymbal
Glockenspiel
Vibraphone
A- gnus De- i
A- gnus De- i
A- gnus De- i
A- gnus De- i
cres.

poco accel.
Suspended Cymbal
Glockenspiel
Vibraphone
Dg. i
gnus
poco accel.

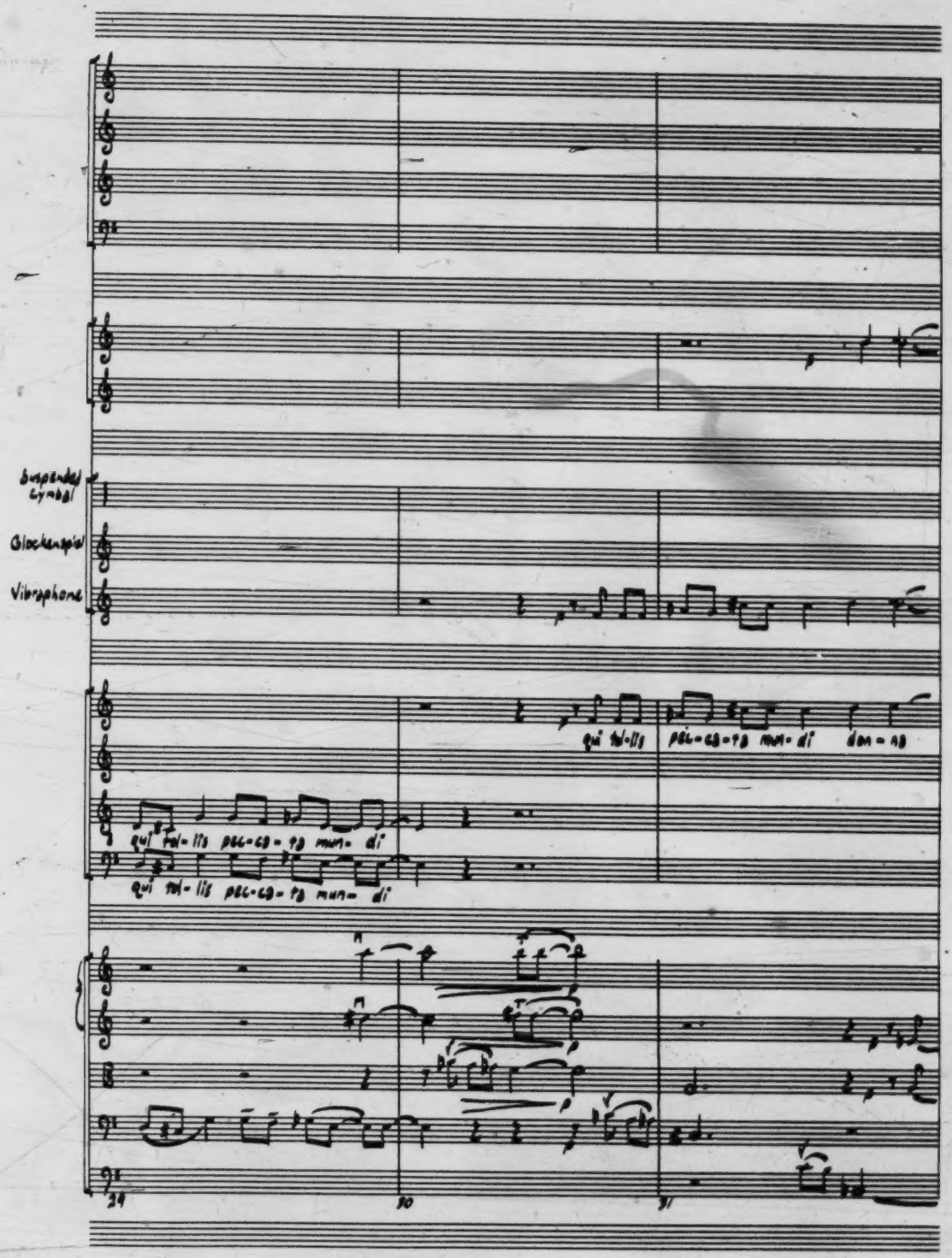

Più mosso ♩ = 70
Suspended Cymbal
Glockenspiel
Vibraphone
gnus De-
gnus
qui
tol- lis
qui
Più mosso ♩ = 70


Con moto ♩= 70
Suspended Cymbal
Glockenspiel
Vibraphone
mi- se- re- re
mi-se-re-re
no- bis
mi-se-re-
Con moto ♩= 70
20
21


poco accel.
Suspended Cymbal
Glocken-spiel
Vibraphone
mi- fa- re- re
re- re
mi- fa- re- re
mi- fa- re- re
mi- fa- re- re
mi- fa- re- re
mi- fa- re- re
re- bis
poco accel.
22
23

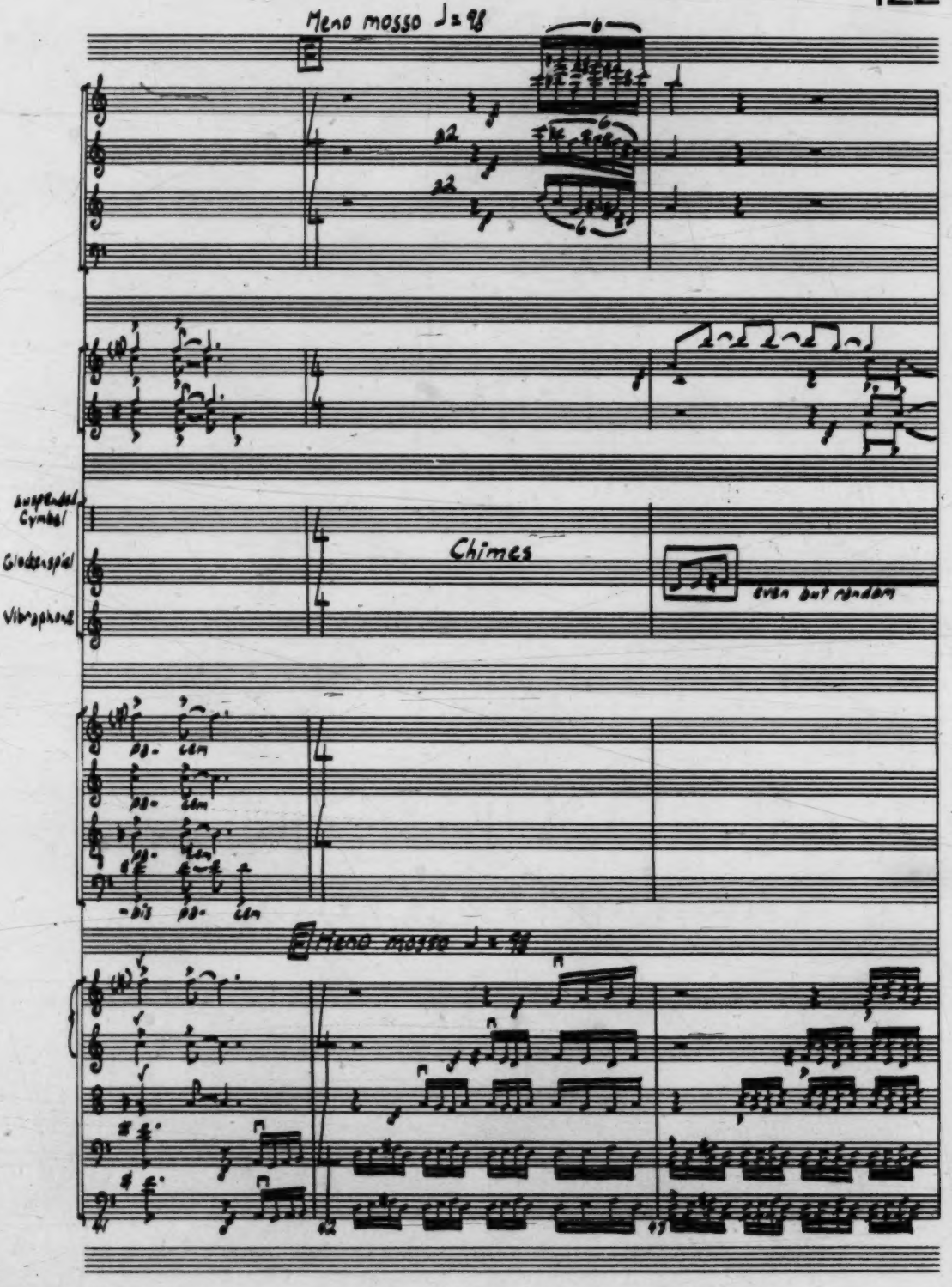
poco rit.
a tempo
Suspended Cymbal
Glockenspiel
Vibraphone
mi- se- re- re
mi- se- re- re
poco rit.
a tempo
24
25

rit.
Più mosso ♩ = 56
Suspended Cymbal
Glockenspiel
Vibraphone
A- gnus De- i
A- gnus De- i
Più mosso ♩ = 56
rit.
div.
26
27
28


Suspended Cymbal
Glockenspiel
Vibraphone
qui tol-lis pec-ca-ta mun-di
qui tol-lis pec-ca-ta mun-di
qui tol-lis pec-ca-ta mun-di do-na
29
30
31

cres.
2°
Suspended Cymbal
Glockenspiel
Vibraphone
Suspended cymbal
l.v.
free time
no- bis pa- cem
do- na
cres.

accel.
molto accel.
Suspended Cymbal
Glockenspiel
Vibraphone
accel.
molto accel.


Meno mosso ♩= 98
Suspended Cymbal
Glockenspiel
Vibraphone
Chimes
even but random
Meno mosso ♩= 98

Suspended Cymbal
Chimes
Vibraphone

Pesante
molto rit.
Suspended Cymbal
Chimes
Vibraphone
Pesante
molto rit.
div.
div.